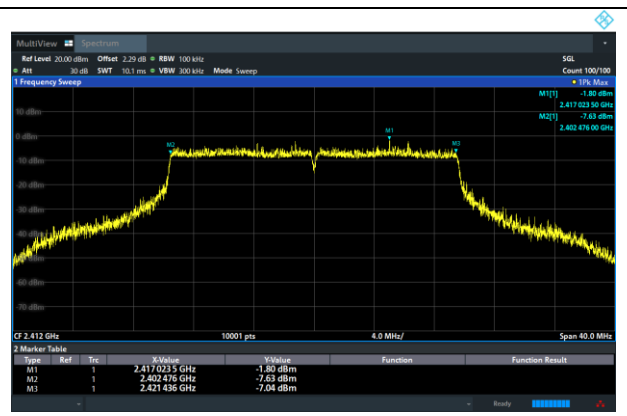
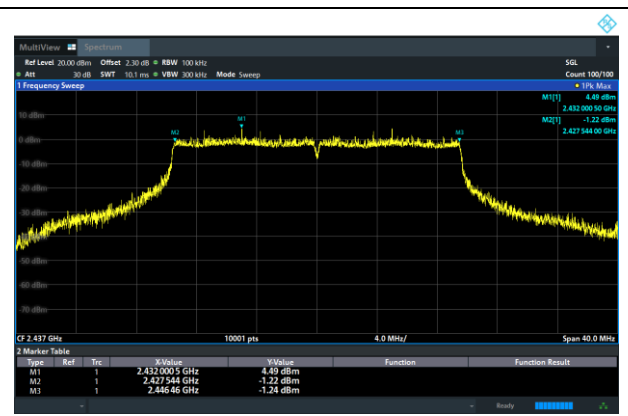
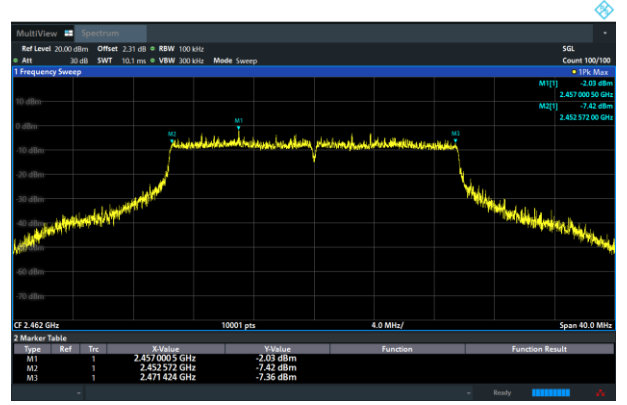


| | | | |
|------------|---------------------------------------|---------------|---------------------------------|
| EUT: | Wireless Carplay/Android Auto Adapter | Model Name: | SY01 |
| Pressure: | 1012 hPa | Test Voltage: | DC 5V from adapter AC 120V/60Hz |
| Test Mode: | TX ax20 Mode /CH01, CH06, CH11 | | |

| Channel | Frequency (MHz) | 6dB bandwidth (MHz) | Limit (kHz) | Result |
|---------|-----------------|---------------------|-------------|--------|
| Low | 2412 | 18.96 | 500 | Pass |
| Middle | 2437 | 18.916 | 500 | Pass |
| High | 2462 | 18.852 | 500 | Pass |

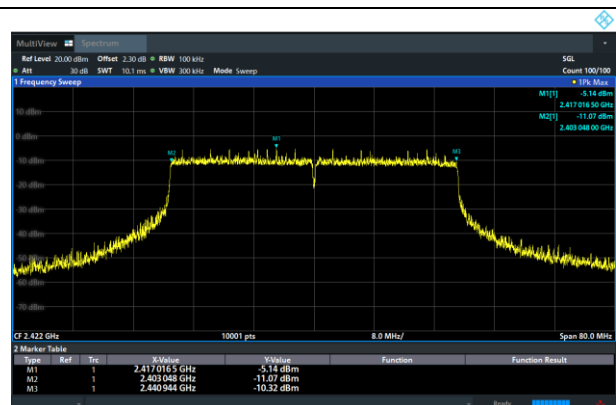
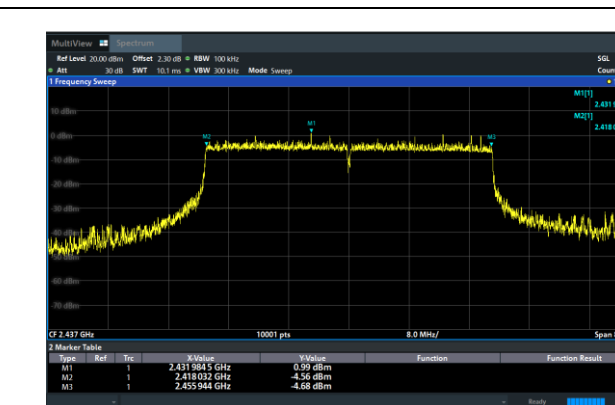
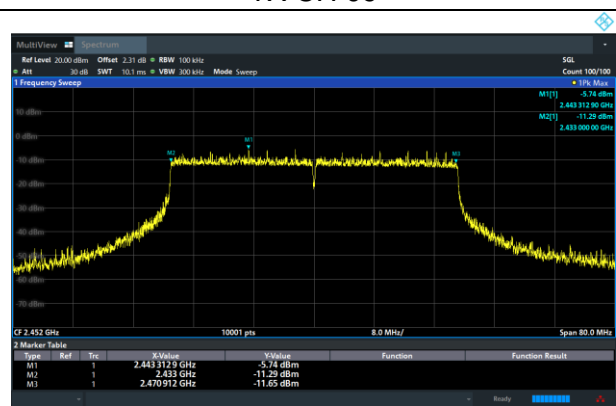
Test plots

| | |
|---|---|
| <p>TX CH 01</p>  | <p>TX CH 06</p>  |
| <p>TX CH 11</p>  | <p>/</p> <p>/</p> |

| | | | |
|------------|---------------------------------------|---------------|---------------------------------|
| EUT: | Wireless Carplay/Android Auto Adapter | Model Name: | SY01 |
| Pressure: | 1012 hPa | Test Voltage: | DC 5V from adapter AC 120V/60Hz |
| Test Mode: | TX ax40 Mode /CH03, CH06, CH09 | | |

| Channel | Frequency (MHz) | 6dB bandwidth (MHz) | Limit (kHz) | Result |
|---------|-----------------|---------------------|-------------|--------|
| Low | 2422 | 37.896 | 500 | Pass |
| Middle | 2437 | 37.912 | 500 | Pass |
| High | 2452 | 37.912 | 500 | Pass |

Test plots

| | |
|---|---|
| <p>TX CH 03</p>  | <p>TX CH 06</p>  |
| <p>TX CH 09</p>  | <p>/</p> |

5.7 Duty Cycle

5.7.1 Limit

No limit requirement.

5.7.2 Test Procedure

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value. Set $VBW \geq RBW$. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

The transmitter output is connected to the Spectrum Analyzer. We tested according to the zero-span measurement method, 6.0(b) in KDB 558074 D01 DTS Meas Guidance v05r02.

The largest available value of RBW is 8 MHz and VBW is 50 MHz. The zero-span method of measuring duty cycle shall not be used if $T \leq 6.25$ microseconds. ($50/6.25 = 8$)

The zero-span method was used because all measured T data are > 6.25 microseconds and both RBW and VBW are $> 50/T$.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously.

The EUT was operating in controlled its channel.

Use the following spectrum analyzer settings:

Span = Zero Span

RBW = 8MHz (the largest available value)

VBW = 8MHz (\geq RBW)

Number of points in Sweep > 100

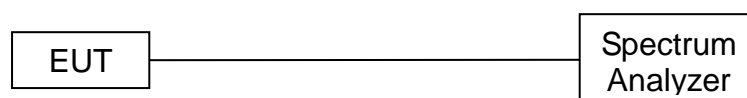
Detector function = peak

Trace = Clear write

Measure Total and Ton

Calculate Duty Cycle = $Ton / Total$

5.7.3 Test Setup



5.7.4 Test Results

| | | | |
|------------|---------------------------------------|---------------|---------------------------------|
| EUT: | Wireless Carplay/Android Auto Adapter | Model Name: | SY01 |
| Pressure: | 1012 hPa | Test Voltage: | DC 5V from adapter AC 120V/60Hz |
| Test Mode: | TX b/g/n/ax(20/40) Mode / CH06 | | |

| Mode | Data rate | Channel | T _{on} ms | T _{total} ms | Duty Cycle | Duty Cycle Factor (dB) |
|--------------|-----------|---------|--------------------|-----------------------|------------|------------------------|
| 802.11b | 1Mbps | 6 | 12.226 | 12.398 | 99.04% | 0.00 |
| 802.11g | 6Mbps | 6 | 2.034 | 2.14 | 95.05% | 0.22 |
| 802.11n HT20 | MCS0 | 6 | 1.894 | 2.016 | 93.95% | 0.27 |
| 802.11n HT40 | MCS0 | 6 | 0.932 | 1.084 | 85.98% | 0.66 |
| 802.11n HE20 | MCS0 | 6 | 3.862 | 3.912 | 98.72% | 0.00 |
| 802.11n HE40 | MCS0 | 6 | 1.958 | 2.094 | 93.51% | 0.29 |

5.8 Conducted Band Edge

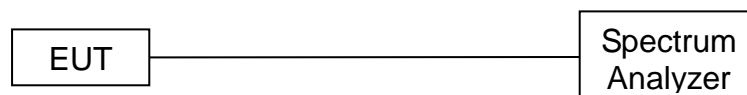
5.8.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

5.8.2 Test Procedure

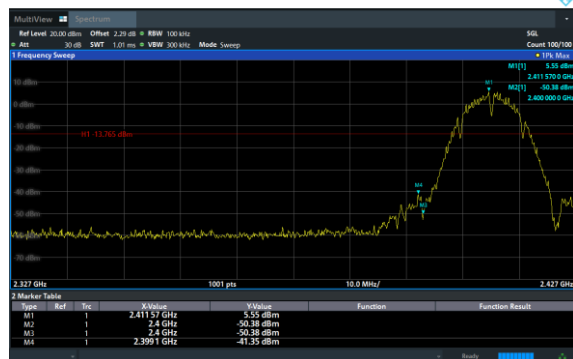
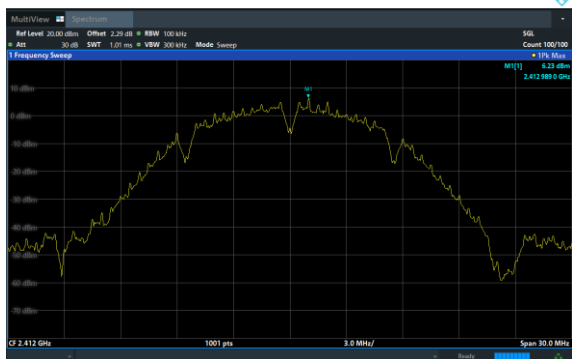
- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- Repeat above procedures until all measured frequencies were complete.

5.8.3 Test Setup

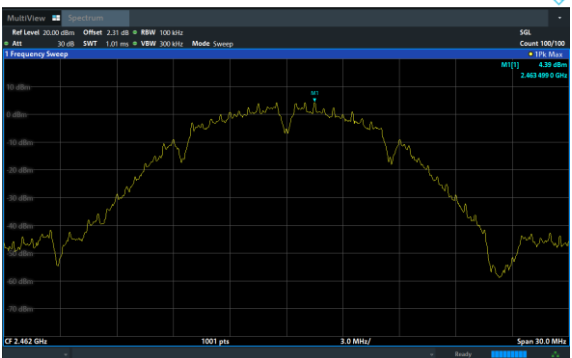


5.8.4 Test Results

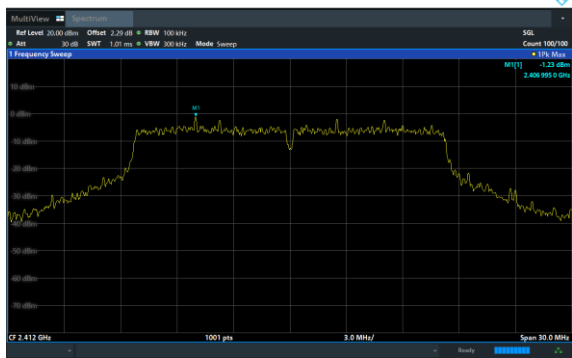
802.11b: Band Edge, Left Side



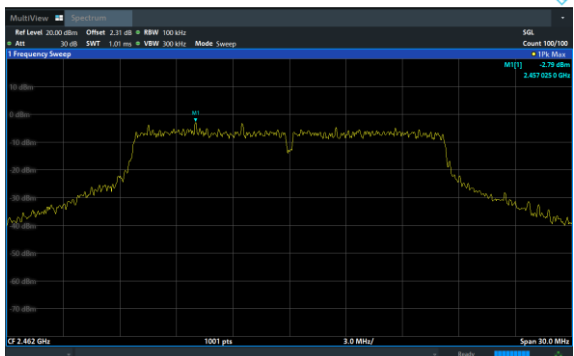
802.11b: Band Edge, Right Side



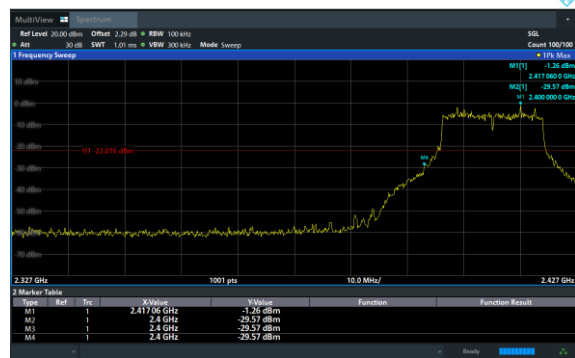
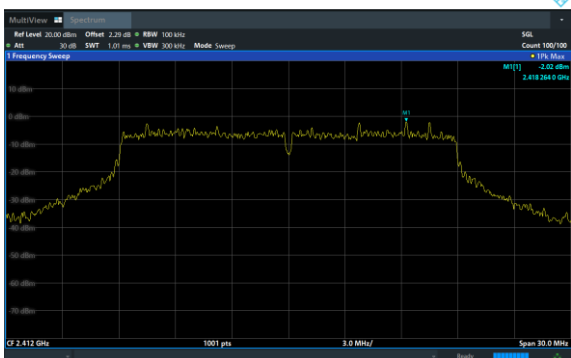
802.11g: Band Edge, Left Side



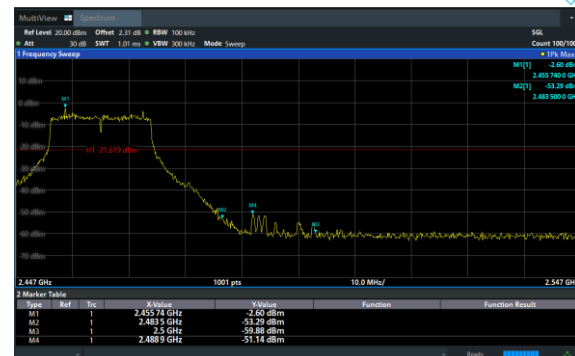
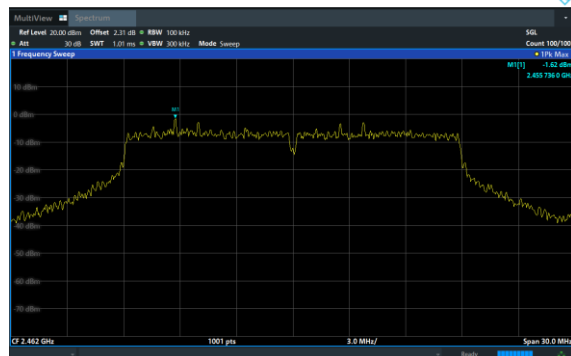
802.11g: Band Edge, Right Side



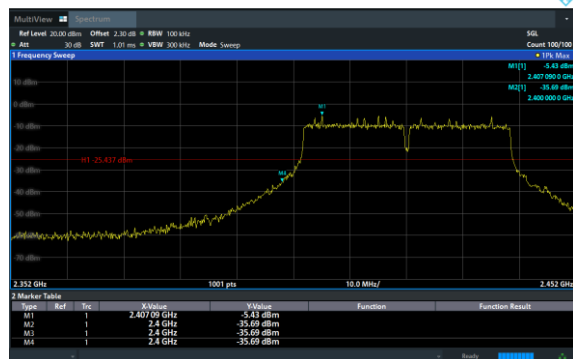
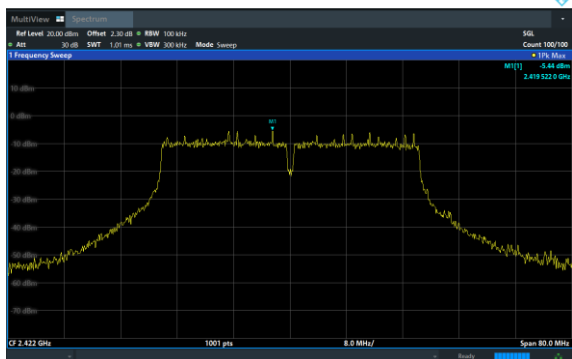
802.11n20: Band Edge, Left Side



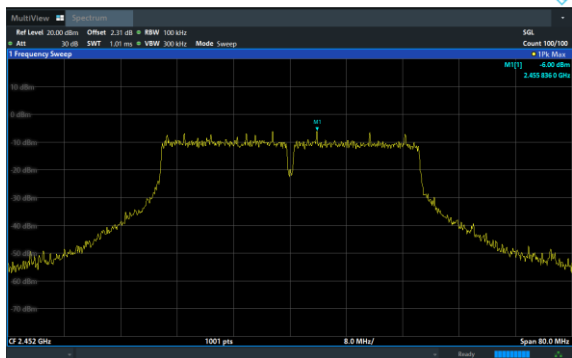
802.11n20: Band Edge, Right Side



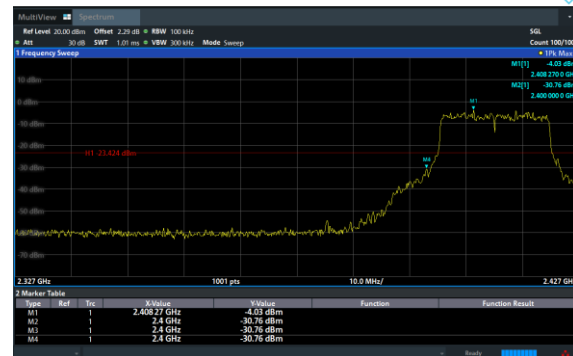
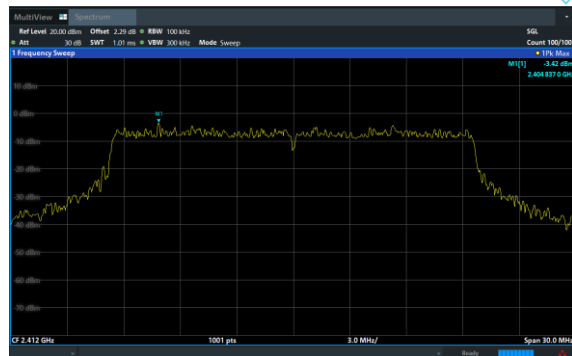
802.11n40: Band Edge, Left Side



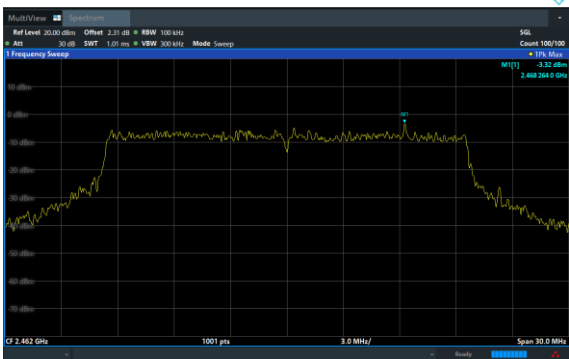
802.11n40: Band Edge, Right Side



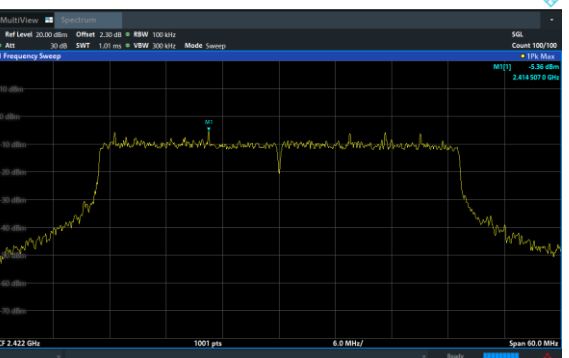
802.11ax20: Band Edge, Left Side



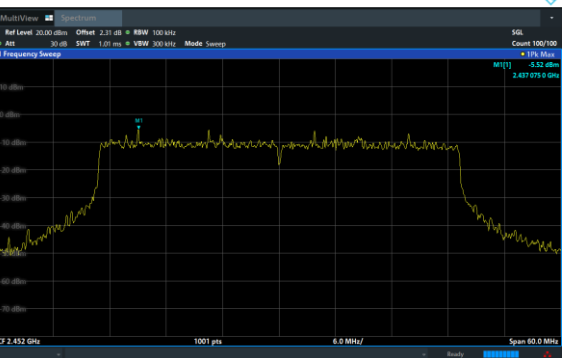
802.11n20: Band Edge, Right Side



802.11ax40: Band Edge, Left Side



802.11ax40: Band Edge, Right Side



5.9 Spurious RF Conducted Emissions

5.9.1 Limit

Below -20dB of the highest emission level in operating band.

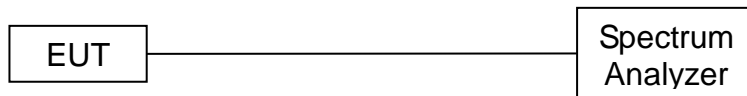
5.9.2 Measuring Instruments

The Measuring equipment is listed in the section 4 of this test report.

5.9.3 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2020 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW=300kHz to measure the peak field strength, and measure frequency range from 9kHz to 26.5GHz.

5.9.4 Test Setup



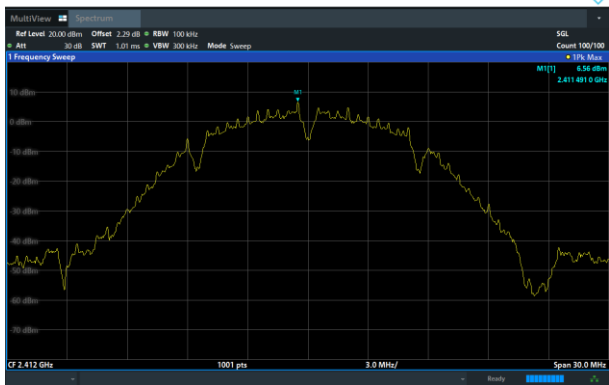
5.9.5 Test Results

Note:

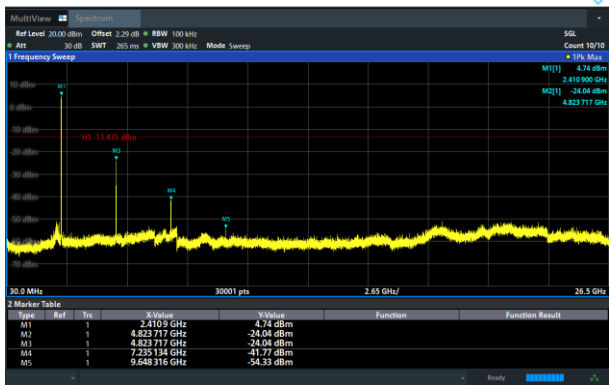
1: The measurement frequency range is from 9kHz to the 10th harmonic of the fundamental frequency; The lowest, middle and highest channels are tested to verify the spurious emissions and band edge measurement data.

2: The three modulated high, medium and low channels have been tested. The report only shows the worst mode. The worst mode is 802.11b CH01/06/11.

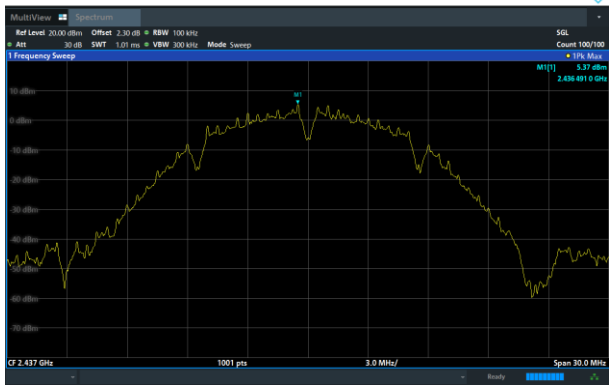
802.11b on Channel 01



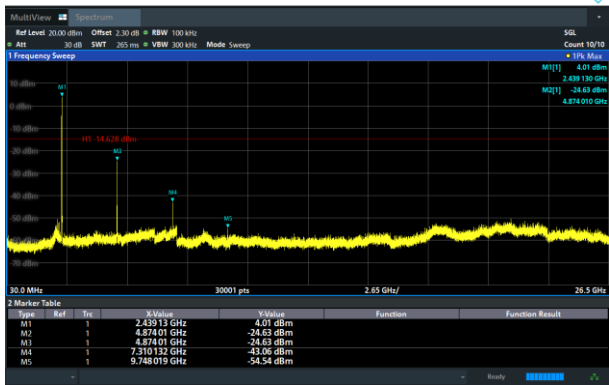
802.11b on Channel 01



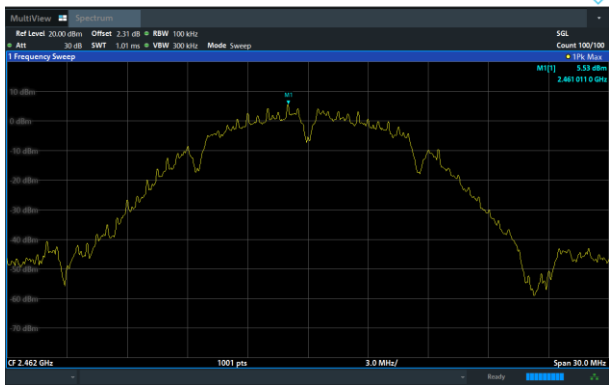
802.11b on Channel 06



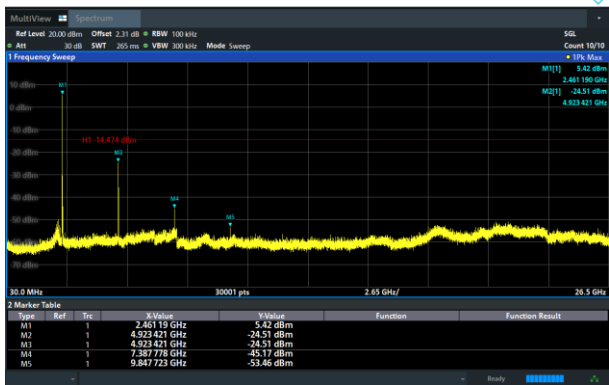
802.11b on Channel 06



802.11b on Channel 11

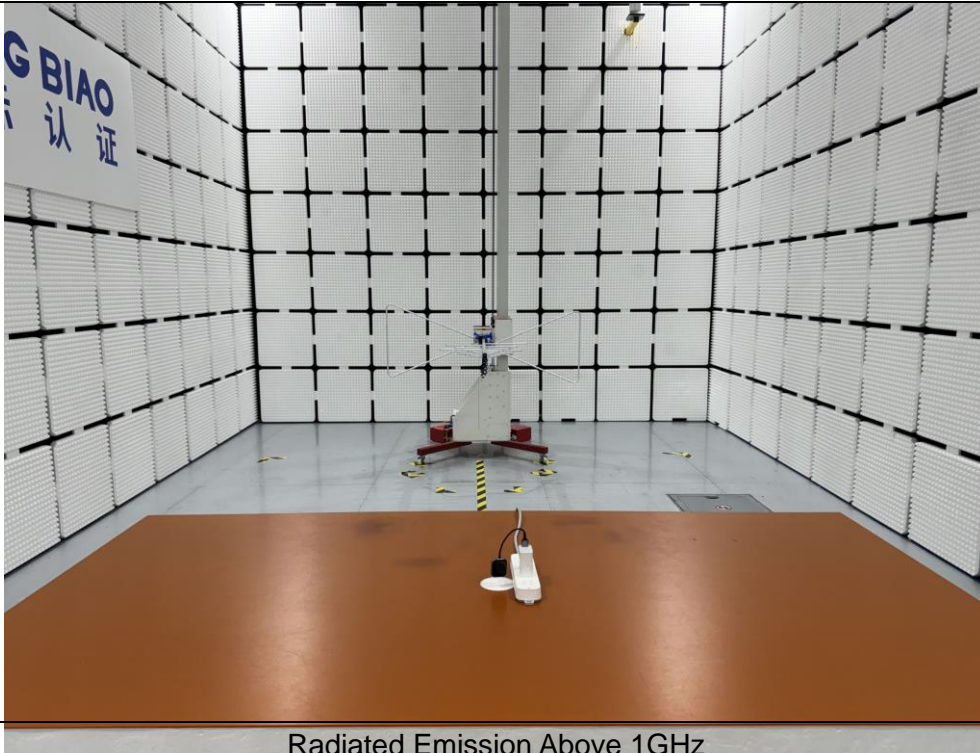


802.11b on Channel 11



6 Photographs of the Test Setup

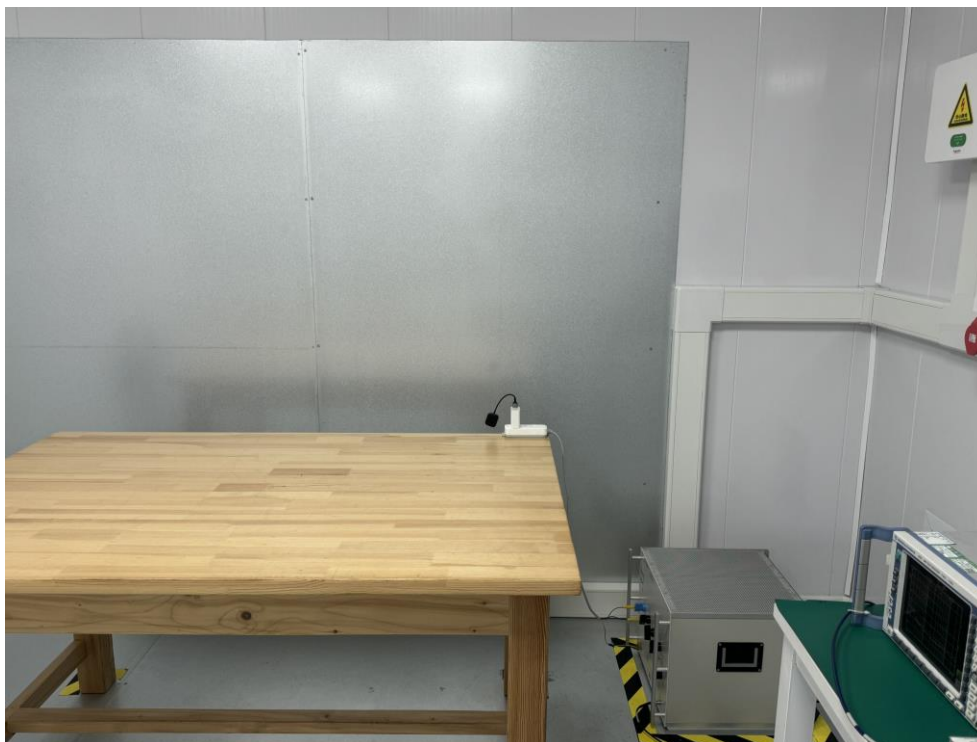
Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



Conducted Emission



7 Photographs of the EUT

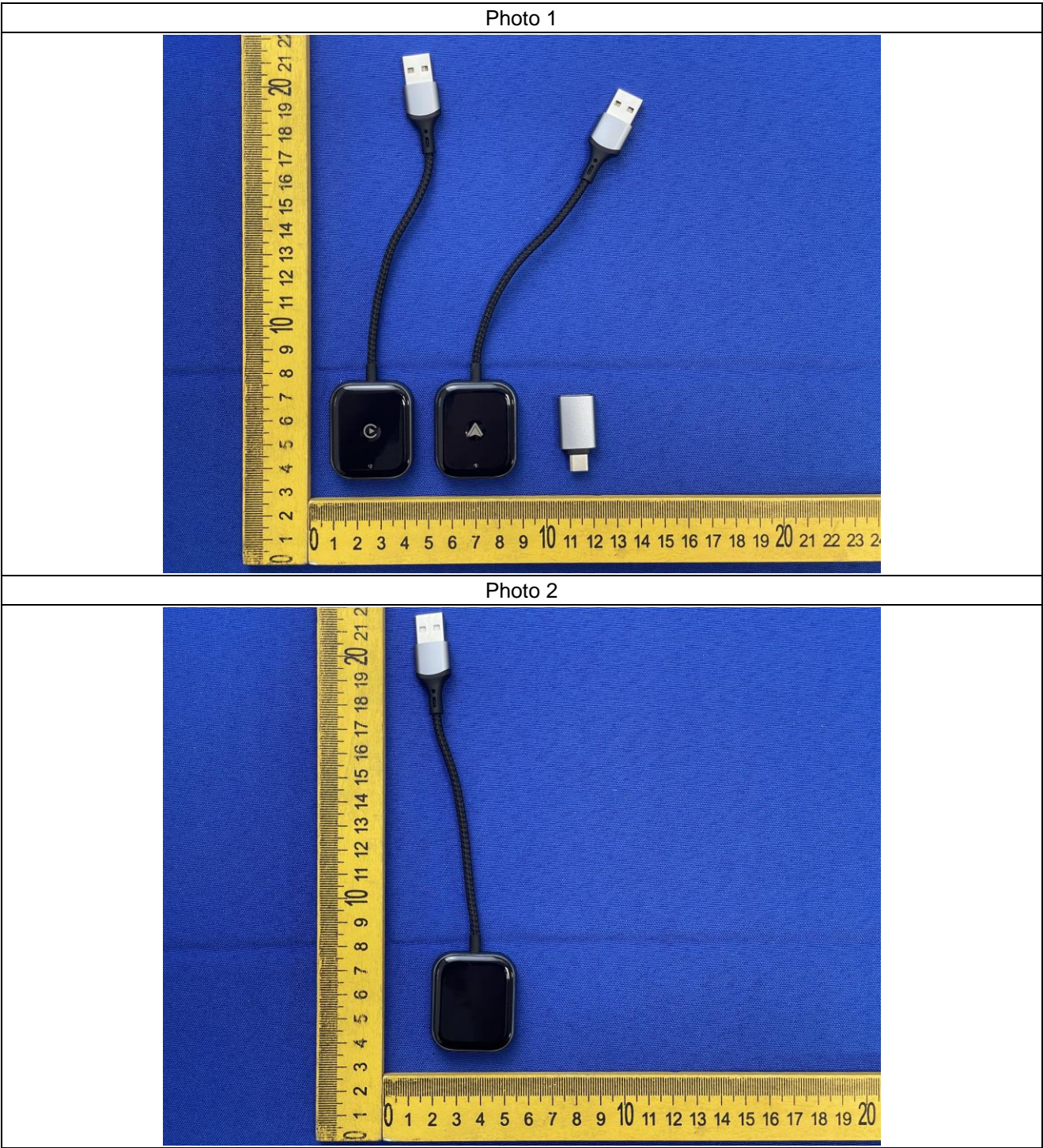


Photo 3



Photo 4



Photo 5



Photo 6

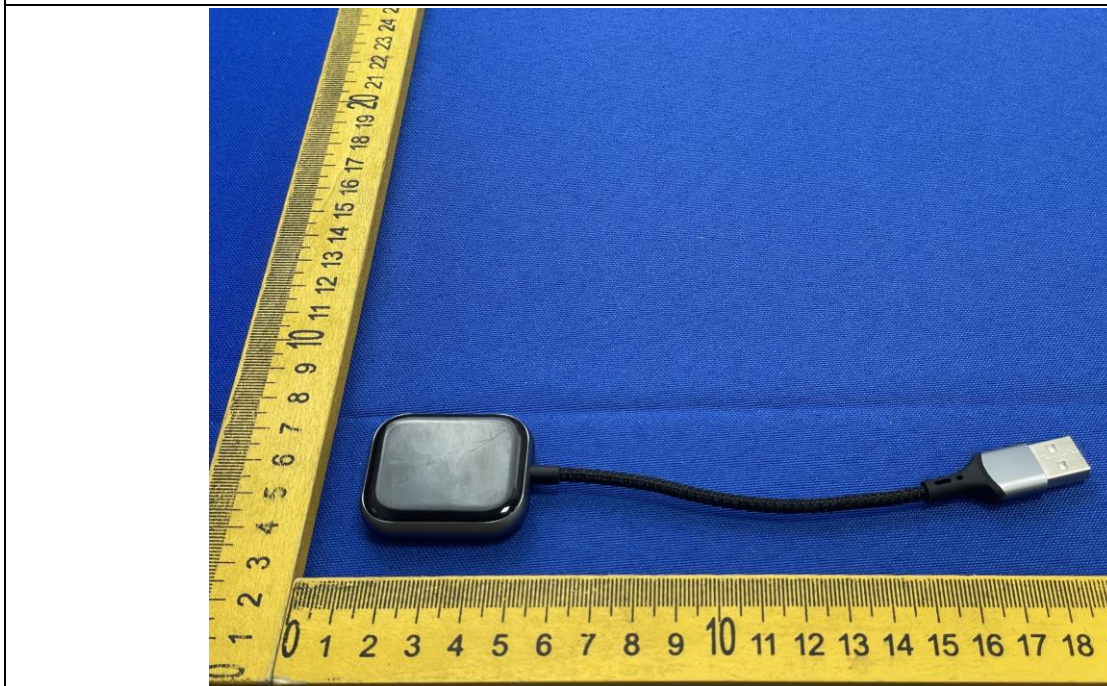


Photo 7

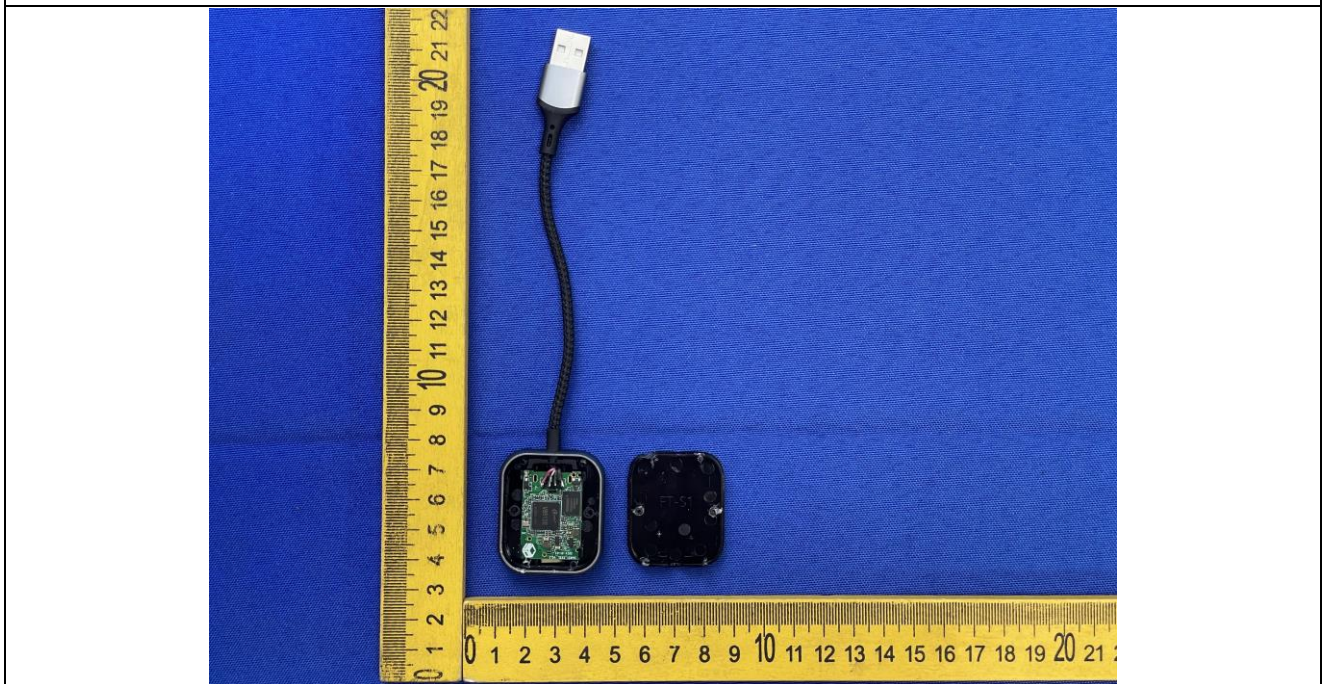


Photo 8

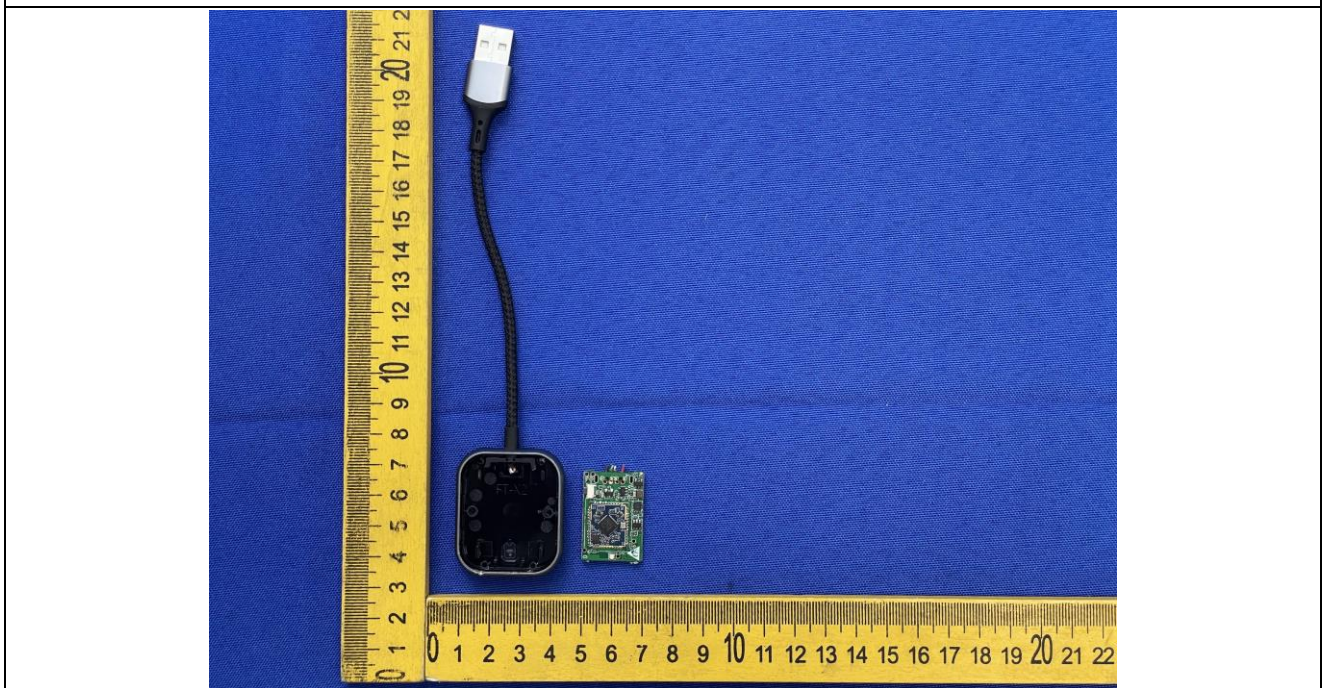


Photo 9

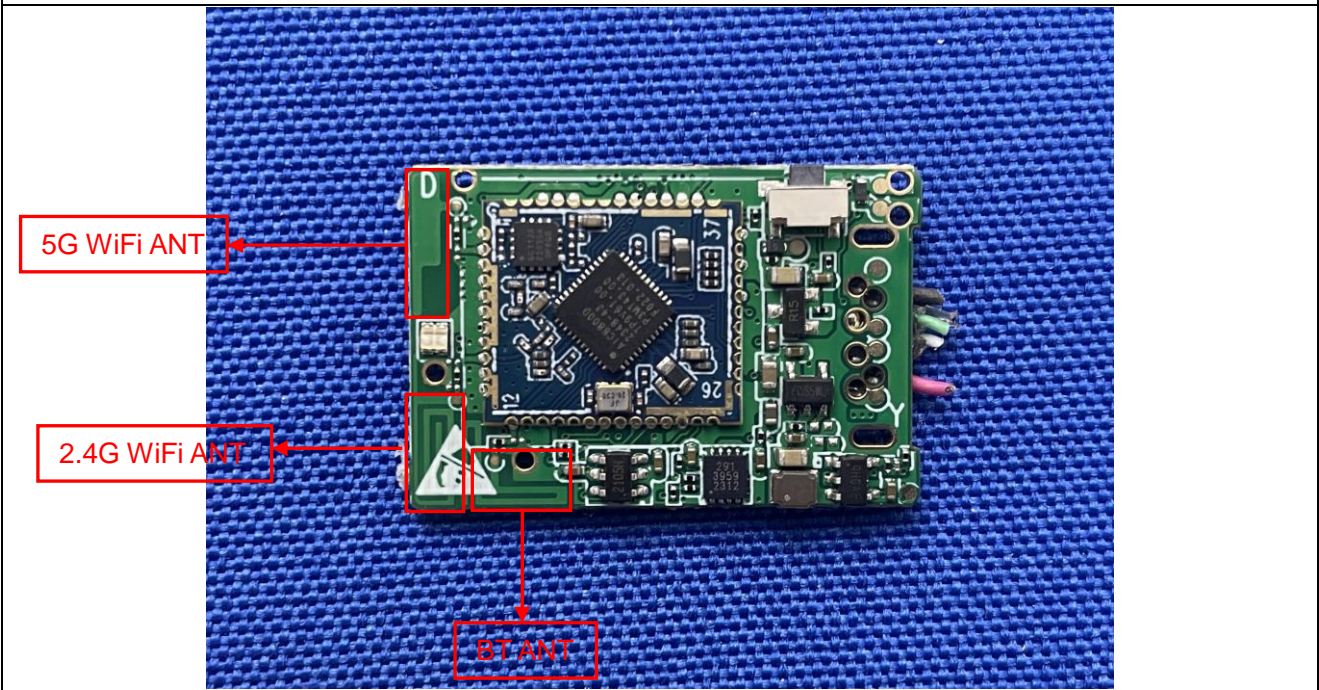
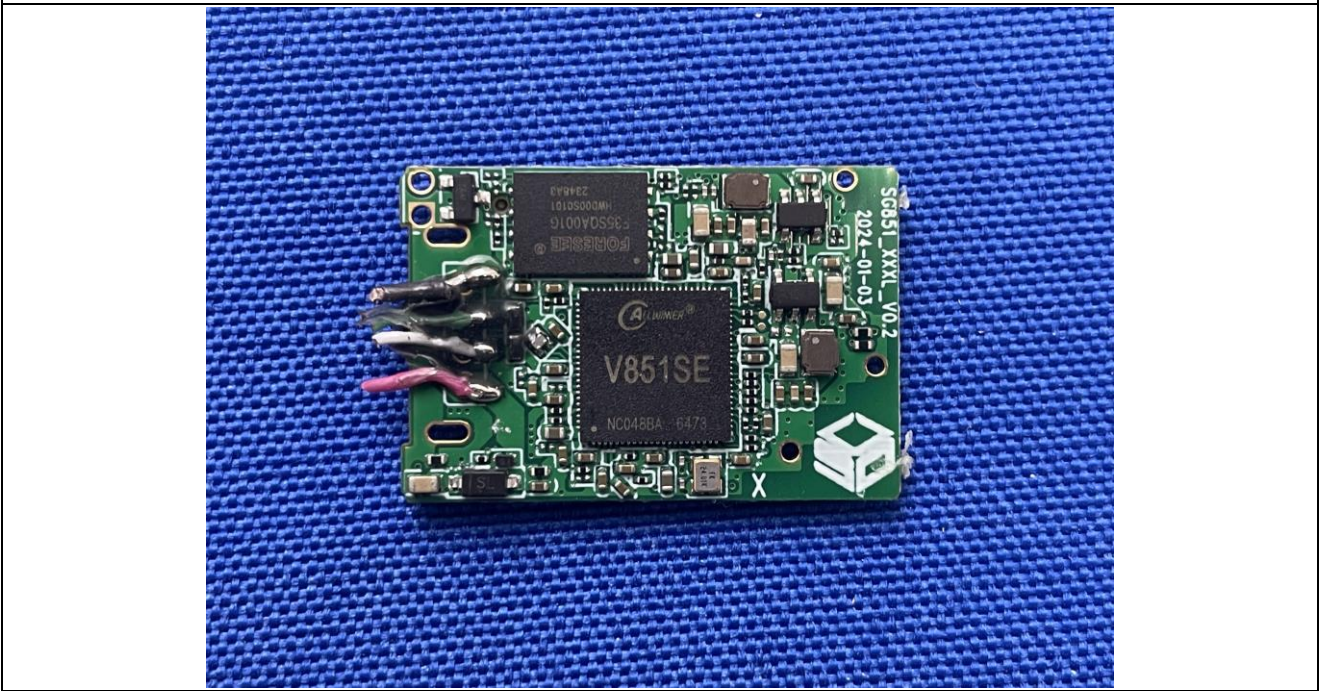


Photo 10



***** END OF REPORT *****