

### 11G-Ant1-2462-PASS



### 11N20SISO-Ant1-2412-PASS



### 11N20SISO-Ant1-2462-PASS



### 11N40SISO-Ant1-2422-PASS



## 9 6dB Bandwidth Measurement

Test Requirement : FCC CFR47 Part 15 Section 15.247

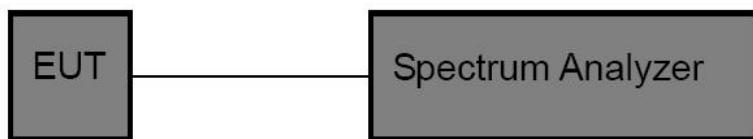
Test Method : ANSI C63.10:2013

Test Limit  
Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 9.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

### 9.2 Test Setup



### 9.3 Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.120	2406.960	2417.080	0.5	PASS
11B	Ant1	2437	10.040	2432.000	2442.040	0.5	PASS
11B	Ant1	2462	10.040	2457.000	2467.040	0.5	PASS
11G	Ant1	2412	16.520	2403.720	2420.240	0.5	PASS
11G	Ant1	2437	16.520	2428.760	2445.280	0.5	PASS
11G	Ant1	2462	16.520	2453.720	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.640	2403.160	2420.800	0.5	PASS
11N20SISO	Ant1	2437	17.640	2428.160	2445.800	0.5	PASS
11N20SISO	Ant1	2462	17.640	2453.160	2470.800	0.5	PASS
11N40SISO	Ant1	2422	36.320	2403.840	2440.160	0.5	PASS
11N40SISO	Ant1	2437	36.320	2418.840	2455.160	0.5	PASS
11N40SISO	Ant1	2452	36.320	2433.840	2470.160	0.5	PASS

## Test Graphs



11B-Ant1-2412-PASS



11B-Ant1-2437-PASS



### 11B-Ant1-2462-PASS



### 11G-Ant1-2412-PASS



### 11G-Ant1-2437-PASS



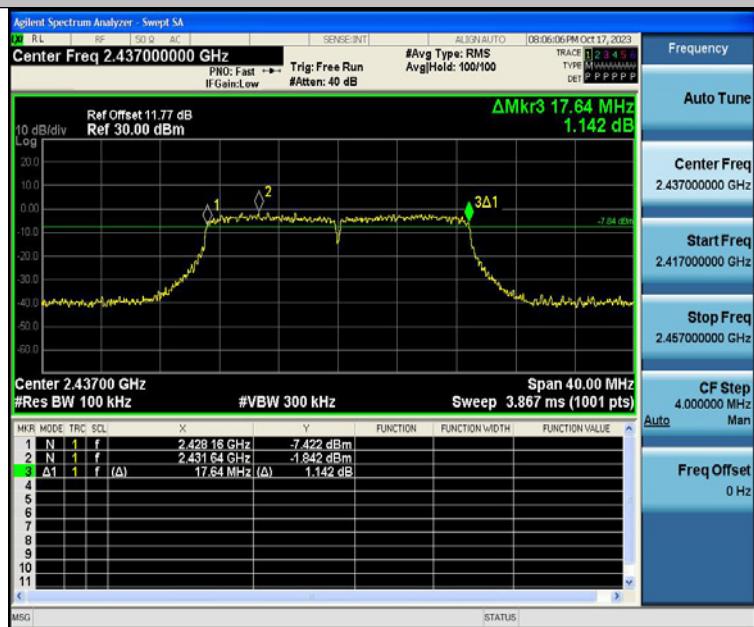
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Report No.:PTC23080209102E-FC02



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11N20SISO-Ant1-2437-PASS



### 11N20SISO-Ant1-2462-PASS



### 11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS

## 10 Maximum Peak Output Power

Test Requirement : FCC CFR47 Part 15 Section 15.247

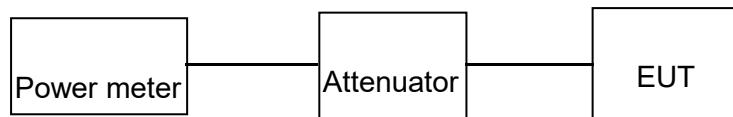
Test Method : ANSI C63.10:2013

Test Limit : Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.

### 10.1 Test Procedure

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 D01 15.247 Meas Guidance v05 section 8.3.1.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

### 10.2 Test Setup



### 10.3 Test Result

Test Mode	Antenna	Frequency[MHz]	Set Power	Peak Power[dBm]	Conducted Limit[dBm]	EIRP [dBm]	EIRP Limit[dBm]	Verdict
11B	Ant1	2412	---	17.43	≤30.00	19.39	≤36.00	PASS
11B	Ant1	2437	---	16.89	≤30.00	18.85	≤36.00	PASS
11B	Ant1	2462	---	16.49	≤30.00	18.45	≤36.00	PASS
11G	Ant1	2412	---	19.86	≤30.00	21.82	≤36.00	PASS
11G	Ant1	2437	---	19.63	≤30.00	21.59	≤36.00	PASS
11G	Ant1	2462	---	19.20	≤30.00	21.16	≤36.00	PASS
11N20SISO	Ant1	2412	---	19.44	≤30.00	21.40	≤36.00	PASS
11N20SISO	Ant1	2437	---	19.47	≤30.00	21.43	≤36.00	PASS
11N20SISO	Ant1	2462	---	18.51	≤30.00	20.47	≤36.00	PASS
11N40SISO	Ant1	2422	---	18.95	≤30.00	20.91	≤36.00	PASS
11N40SISO	Ant1	2437	---	18.79	≤30.00	20.75	≤36.00	PASS
11N40SISO	Ant1	2452	---	18.71	≤30.00	20.67	≤36.00	PASS

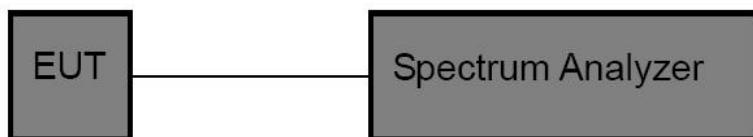
## 11 Power Spectral density

Test Requirement	: FCC CFR47 Part 15 Section 15.247
Test Method	: ANSI C63.10:2013
Test Limit	: Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 11.1 Test Procedure

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below:
  - Center frequency=DTS channel center frequency
  - Span = 1.5 times the DTS bandwidth
  - RBW = 3KHz, VBW = 10KHz
  - Sweep time = auto couple
  - Detector = peak
  - Trace mode =max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter wave form on the spectrum analyzer.
4. Use the peak marker function to determine the maximum amplitude level within the RBW.
5. If measured value exceeds limit, reduce RBW(no less than 3KHz) and repeat.

### 11.2 Test Setup



### 11.3 Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-15.39	≤8.00	PASS
11B	Ant1	2437	-15.98	≤8.00	PASS
11B	Ant1	2462	-16.32	≤8.00	PASS
11G	Ant1	2412	-14.62	≤8.00	PASS
11G	Ant1	2437	-15.69	≤8.00	PASS
11G	Ant1	2462	-16.15	≤8.00	PASS
11N20SISO	Ant1	2412	-14.91	≤8.00	PASS
11N20SISO	Ant1	2437	-15.27	≤8.00	PASS
11N20SISO	Ant1	2462	-15.63	≤8.00	PASS
11N40SISO	Ant1	2422	-16.31	≤8.00	PASS
11N40SISO	Ant1	2437	-16.61	≤8.00	PASS
11N40SISO	Ant1	2452	-16.46	≤8.00	PASS

## Test Graphs



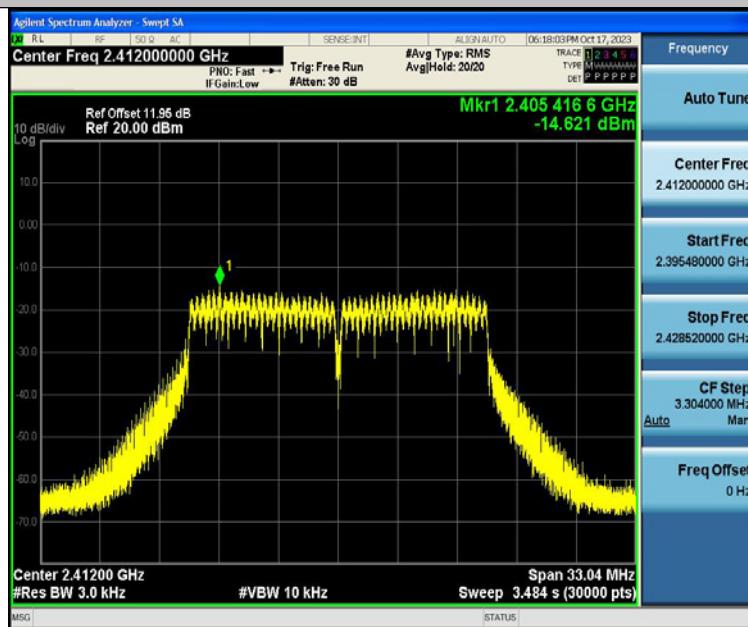
11B-Ant1-2412-PASS



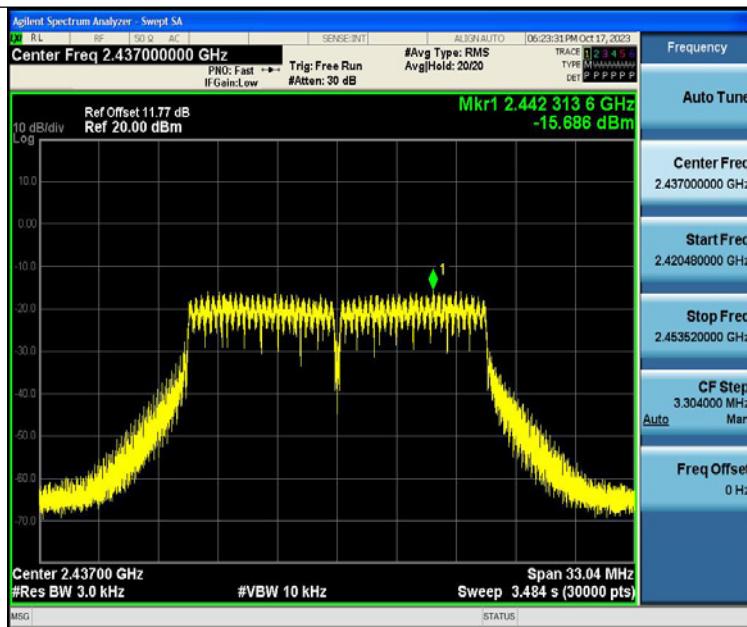
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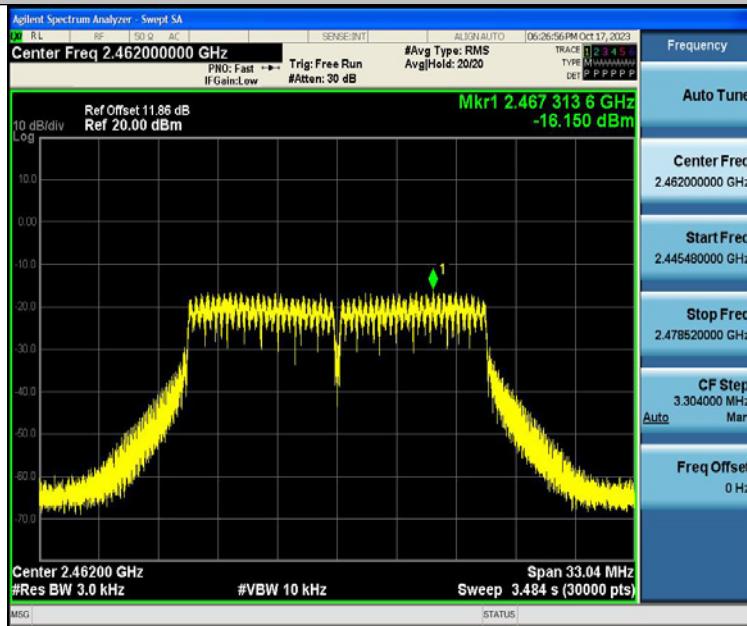
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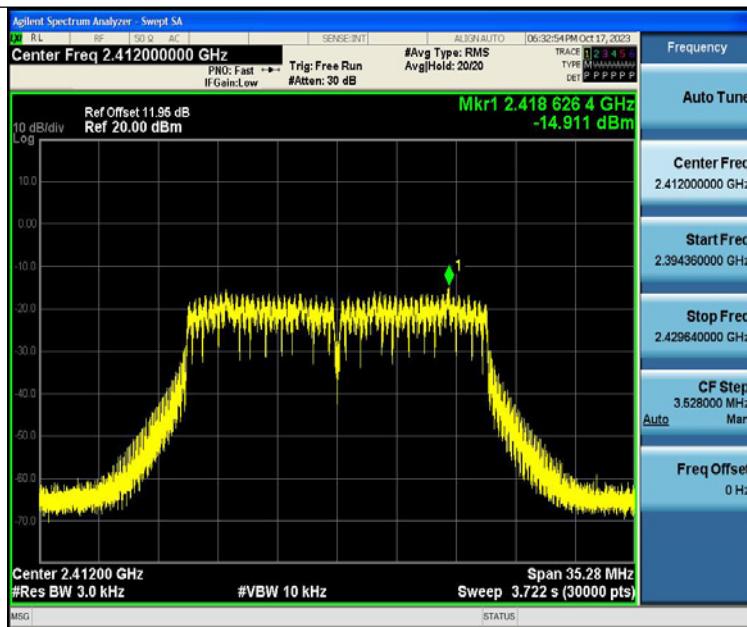
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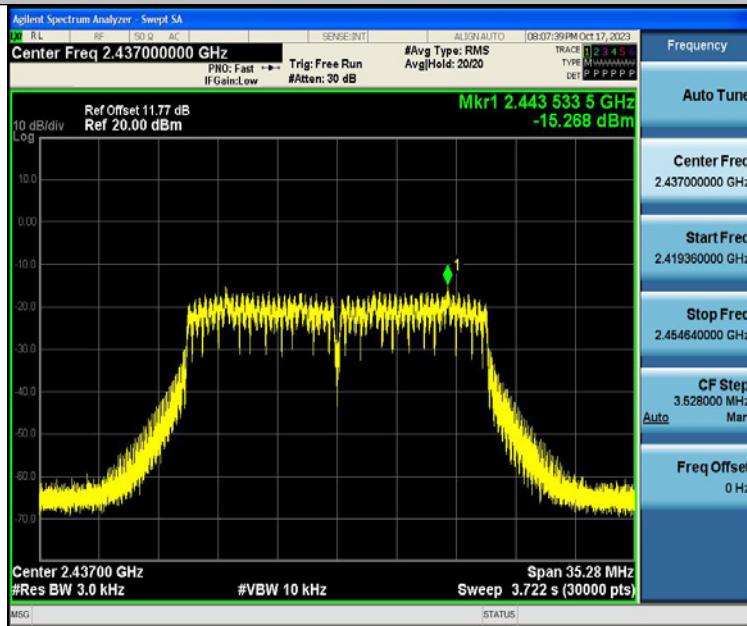
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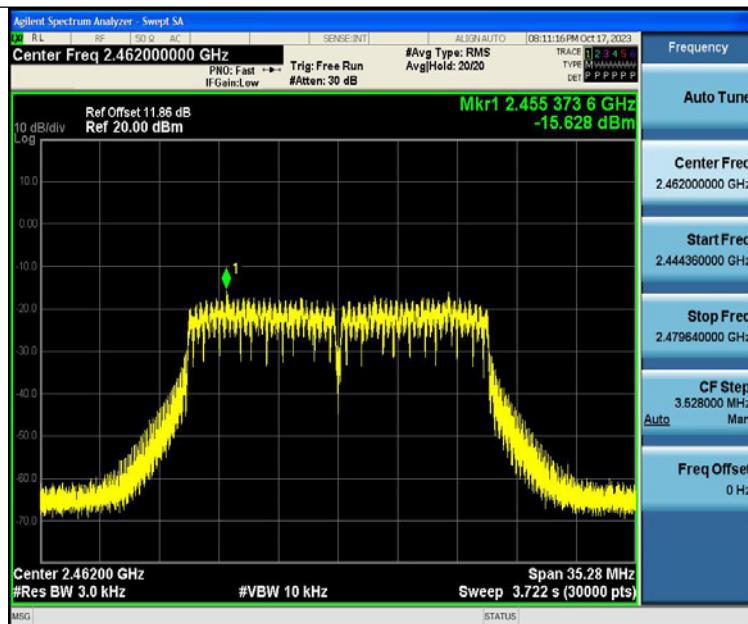
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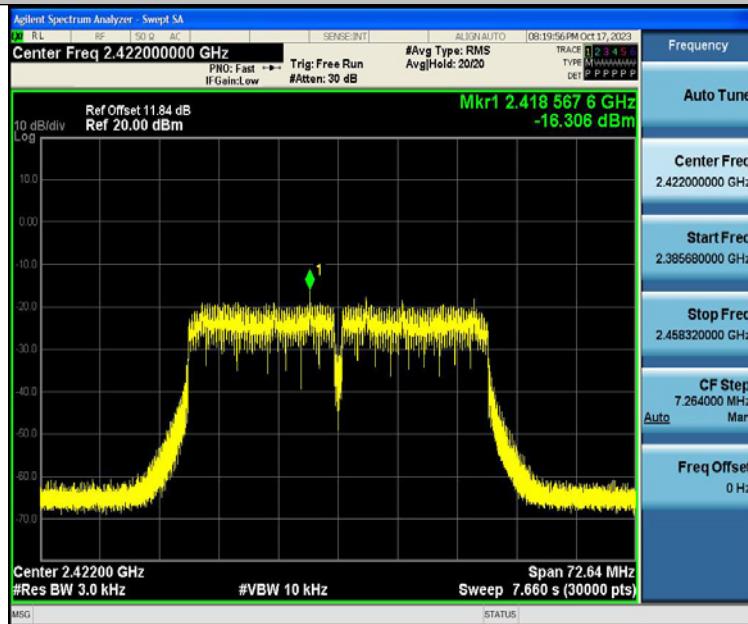
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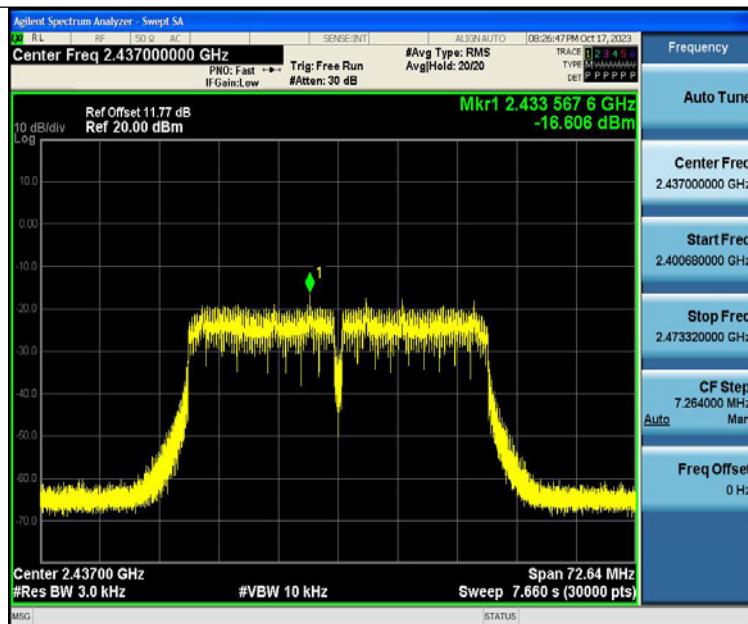
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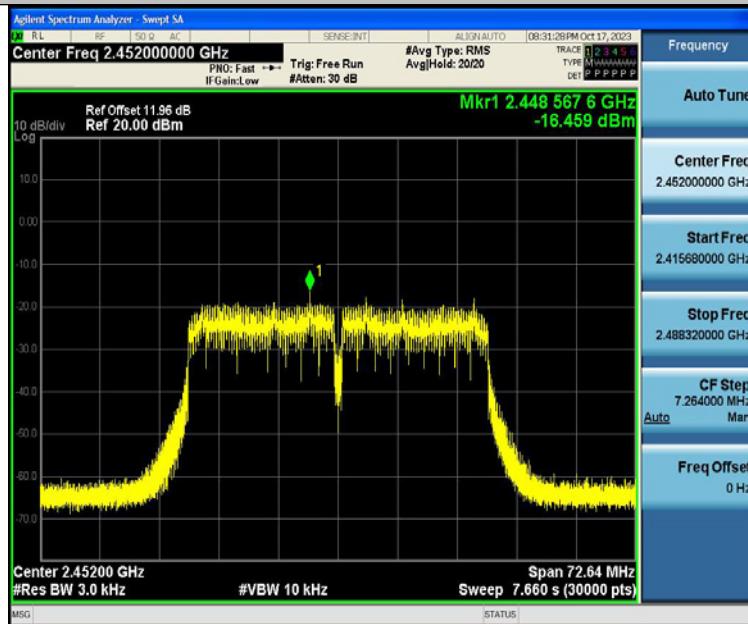
### 11N20SISO-Ant1-2462-PASS



### 11N40SISO-Ant1-2422-PASS



### 11N40SISO-Ant1-2437-PASS



### 11N40SISO-Ant1-2452-PASS



## 12 Antenna Application

### 12.1 Antenna Requirement

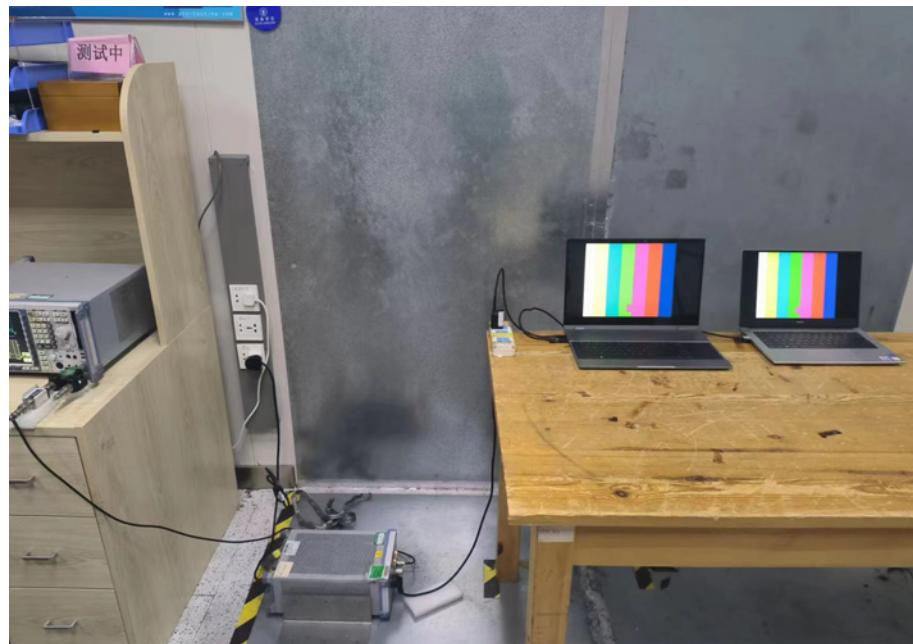
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 12.2 Result

The EUT'S antenna, permanent attached antenna, is PIFA Antenna. The antenna's gain is 1.96 dBi and meets the requirement.

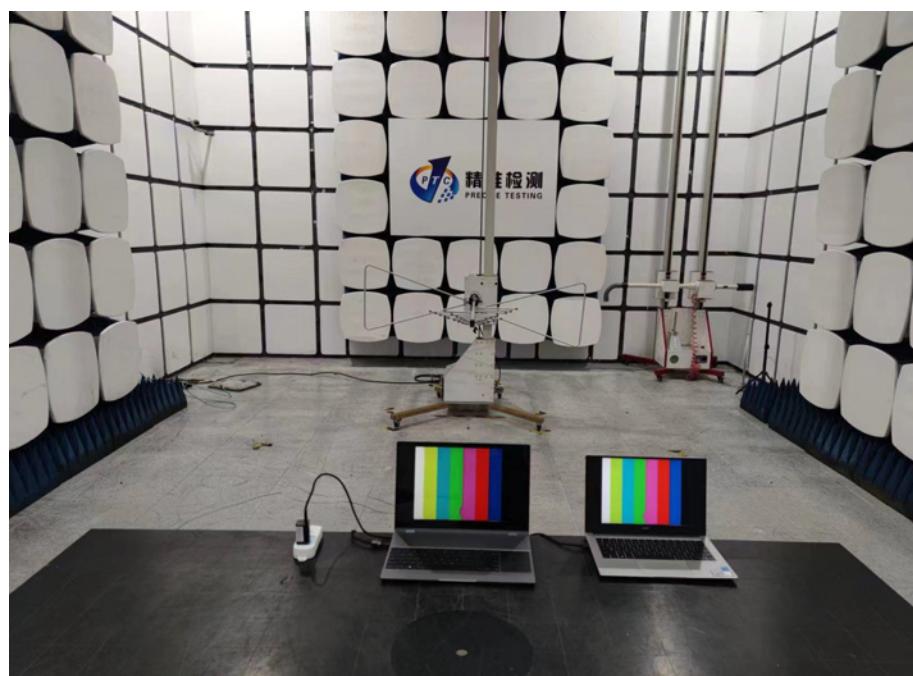
## 13 Test Setup

### Conducted Emissions

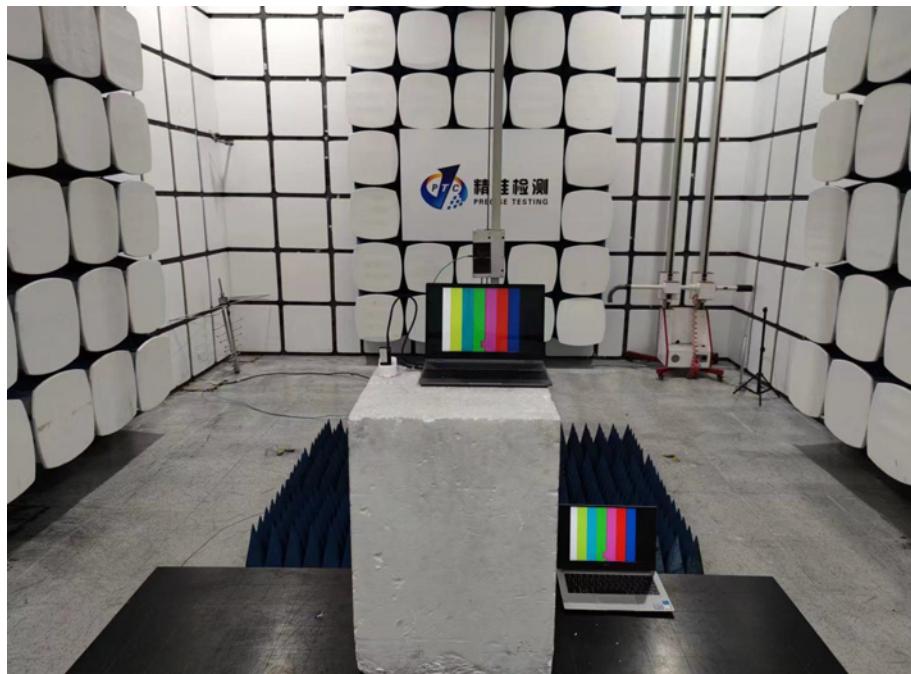


### Radiated Spurious Emissions

### Test Frequency From Below 30MHz

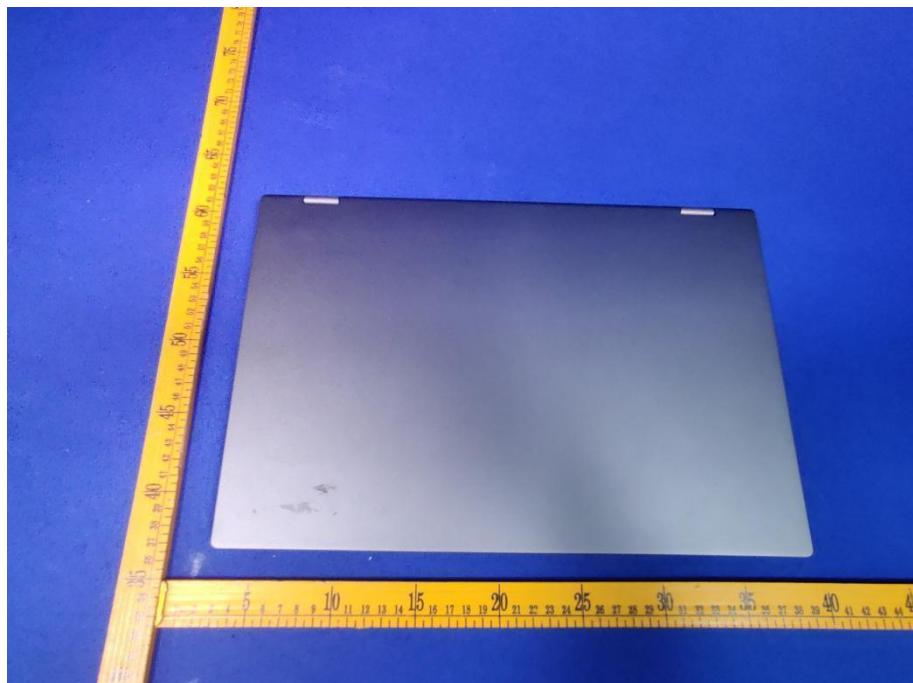


Test frequency from Above 1GHz

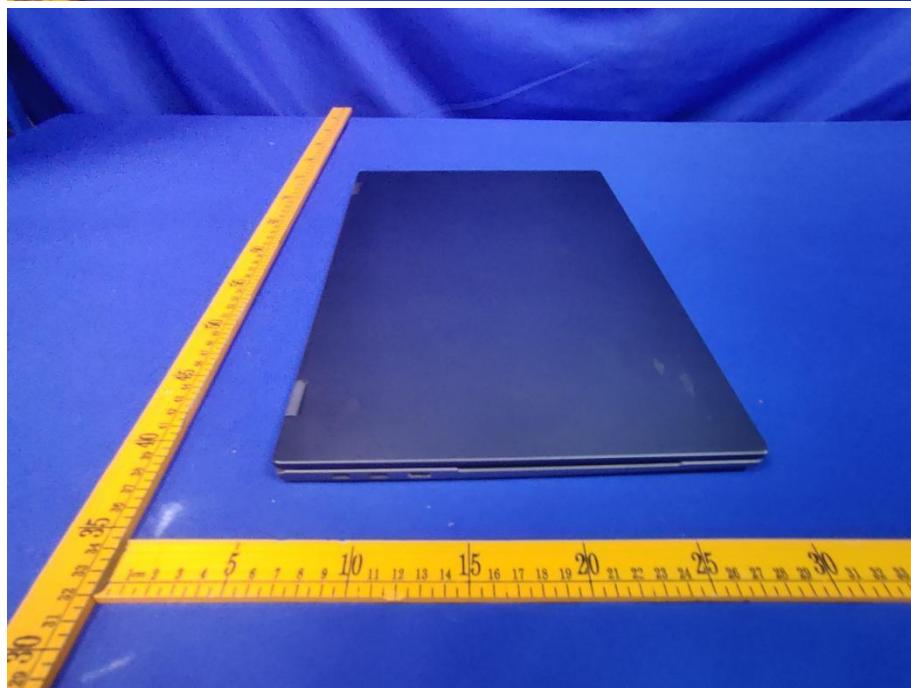


## 14 EUT EXTERNAL PHOTOGRAPH

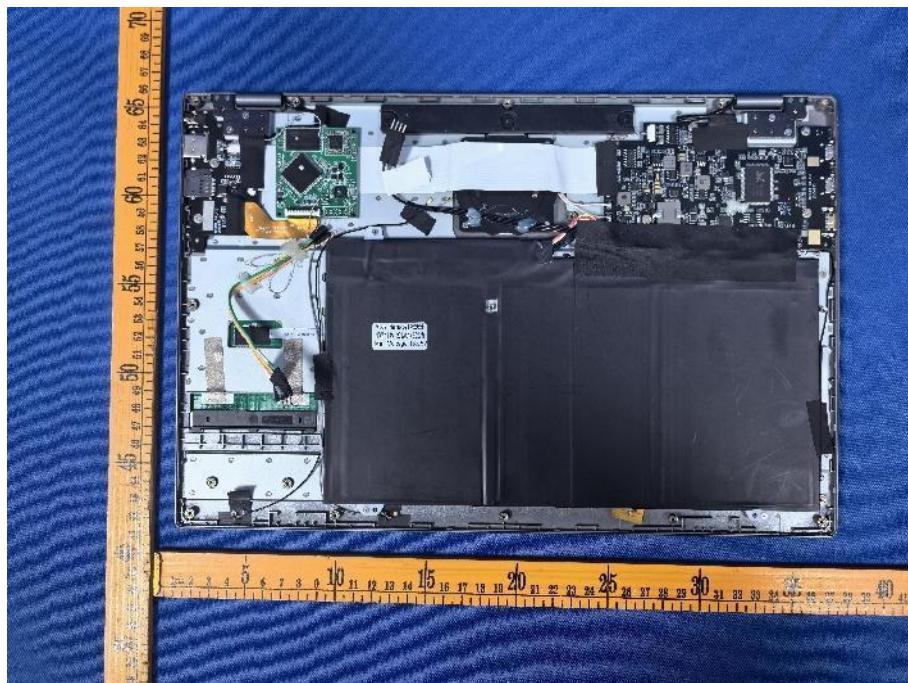


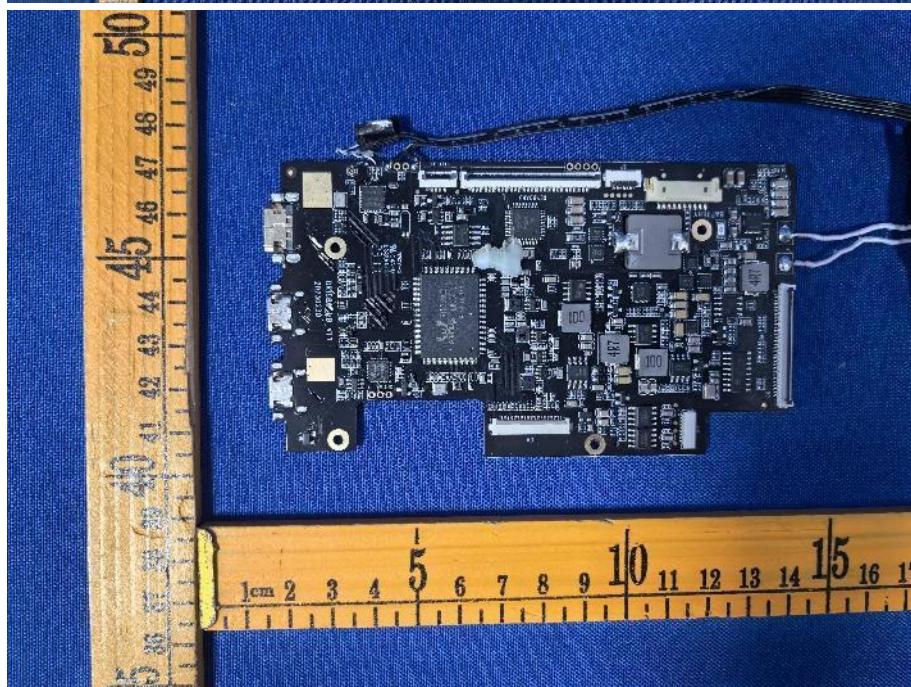
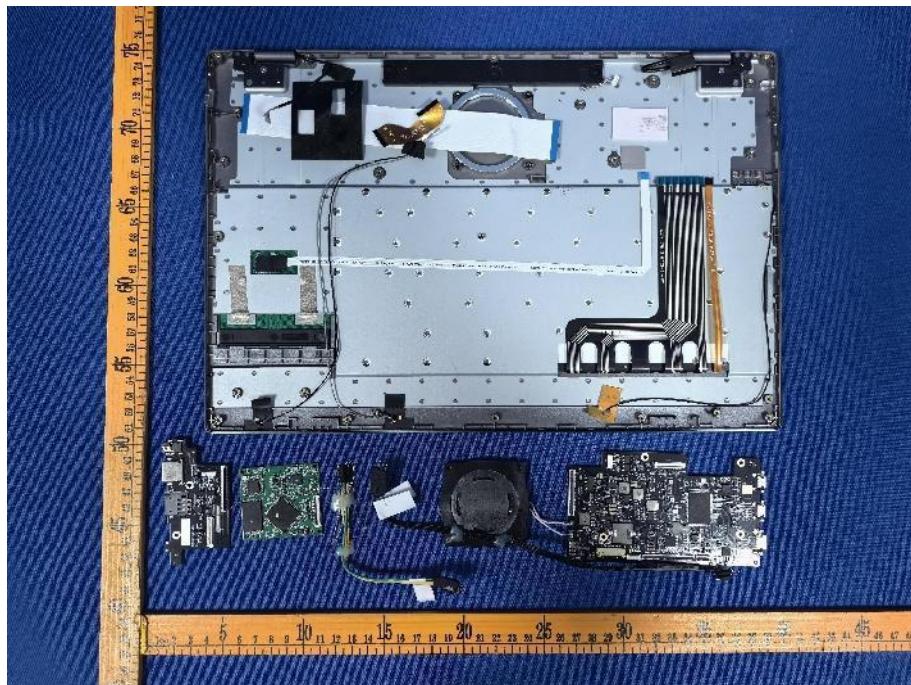


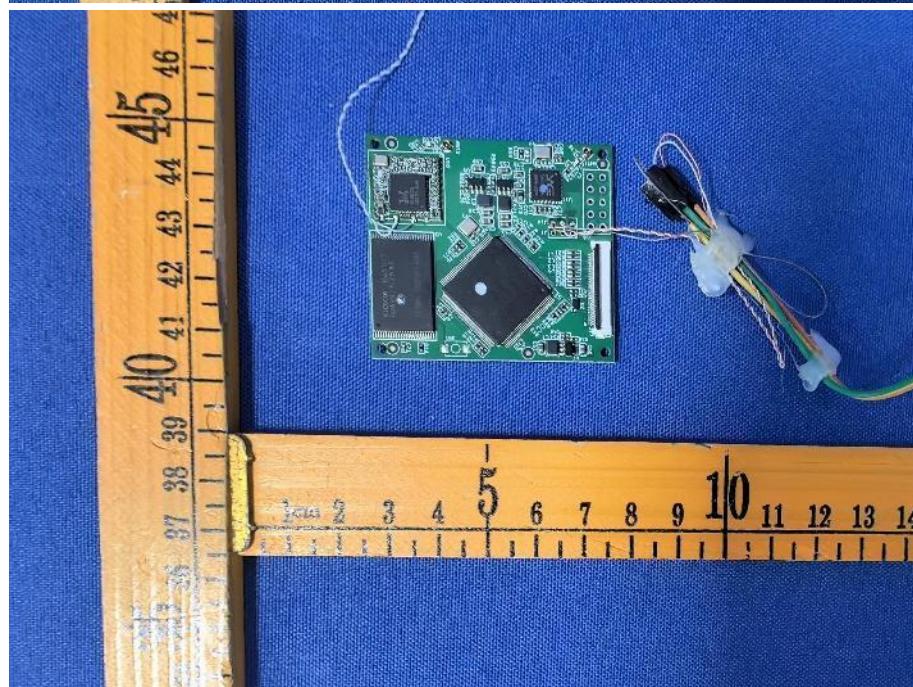
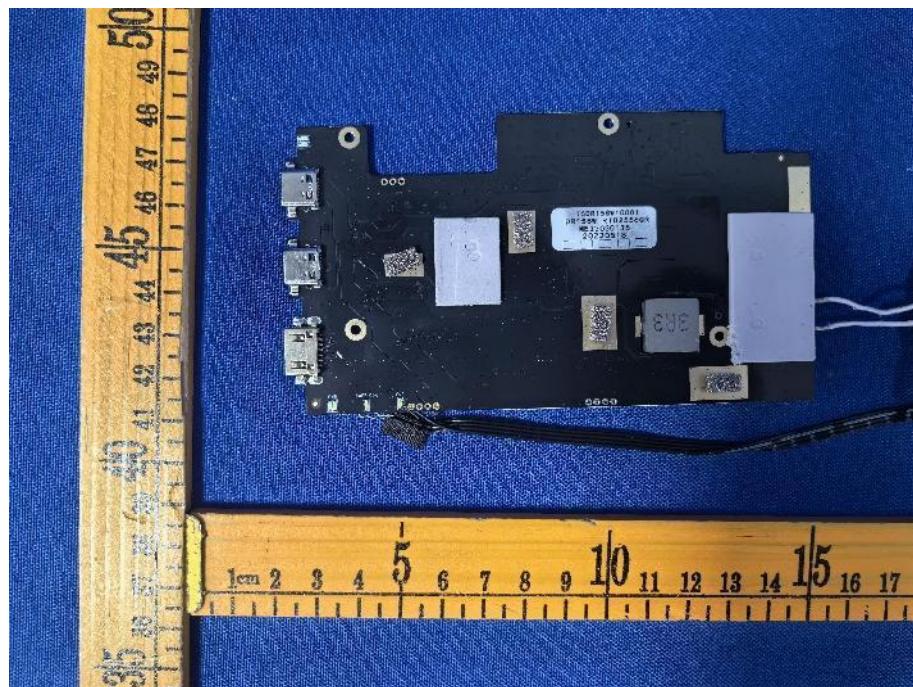


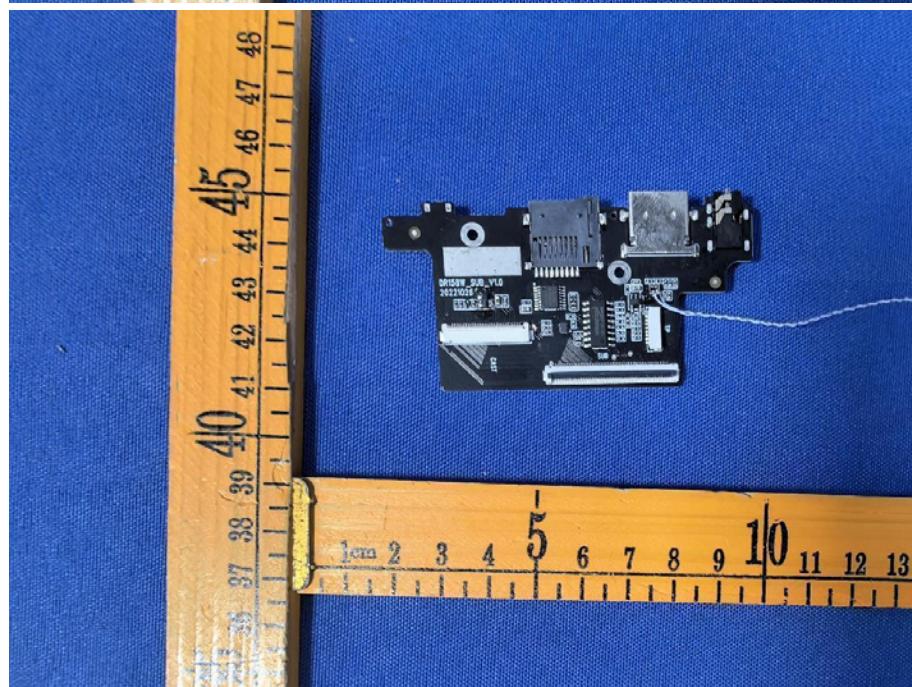
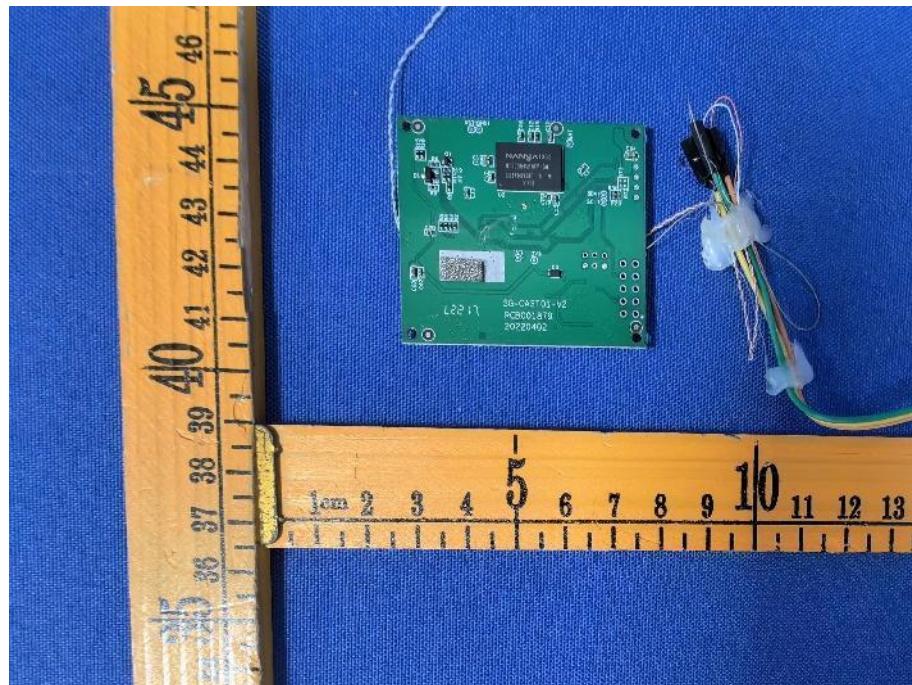


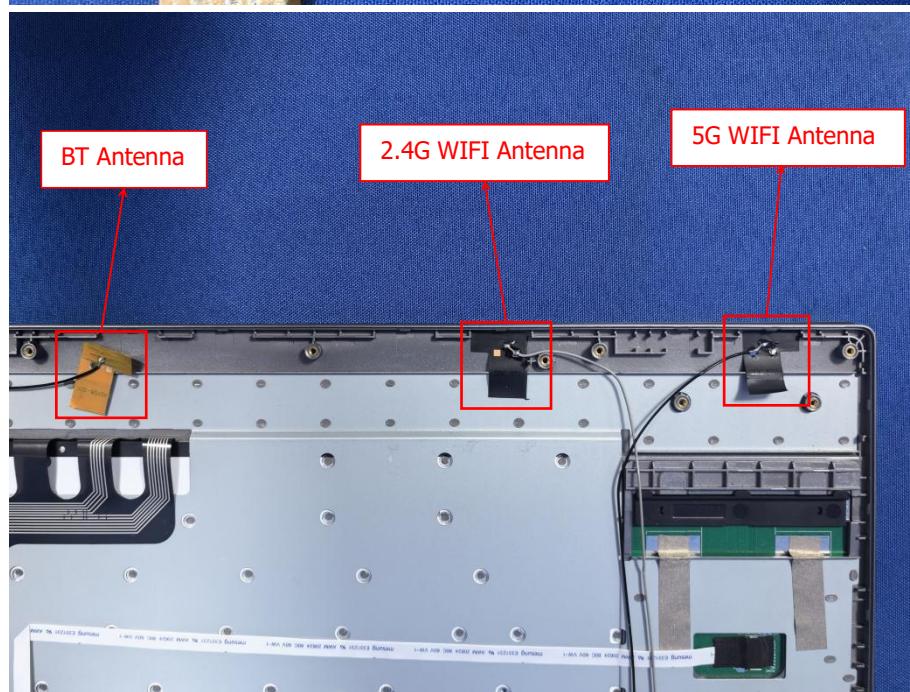
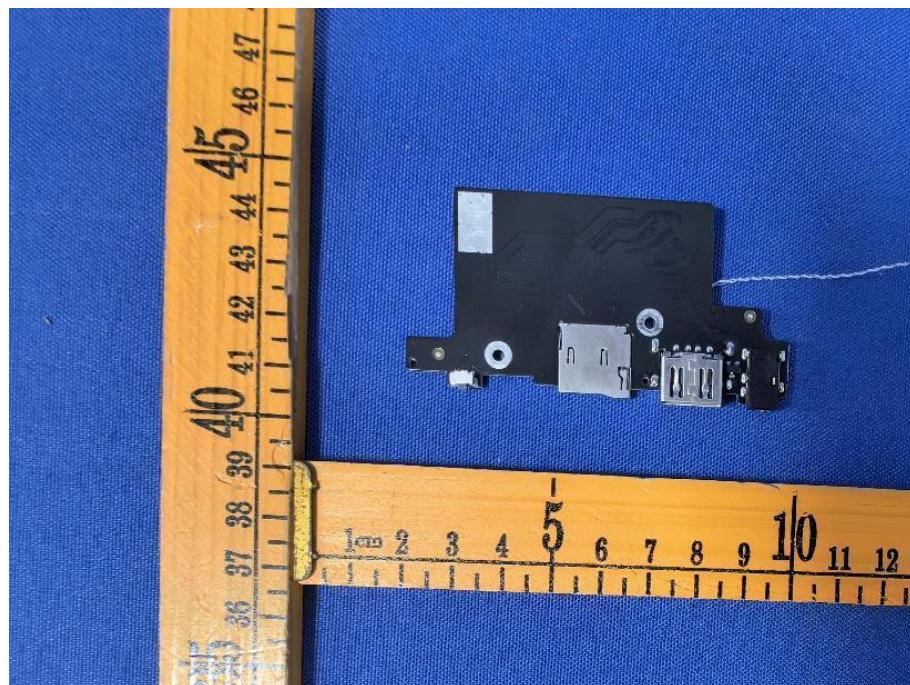
## 15 EUT INTERNAL PHOTOGRAPH

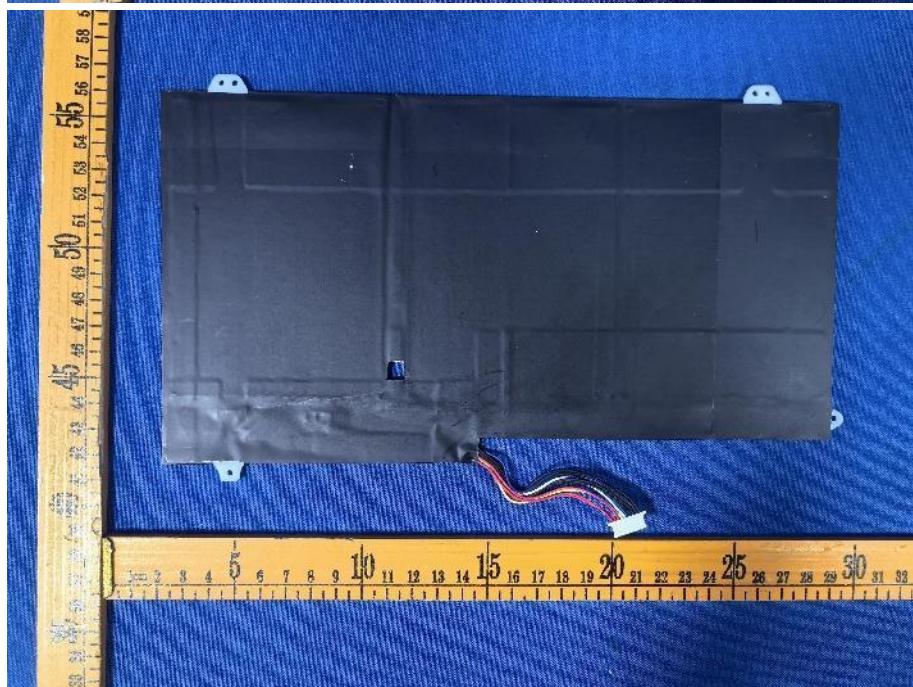












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