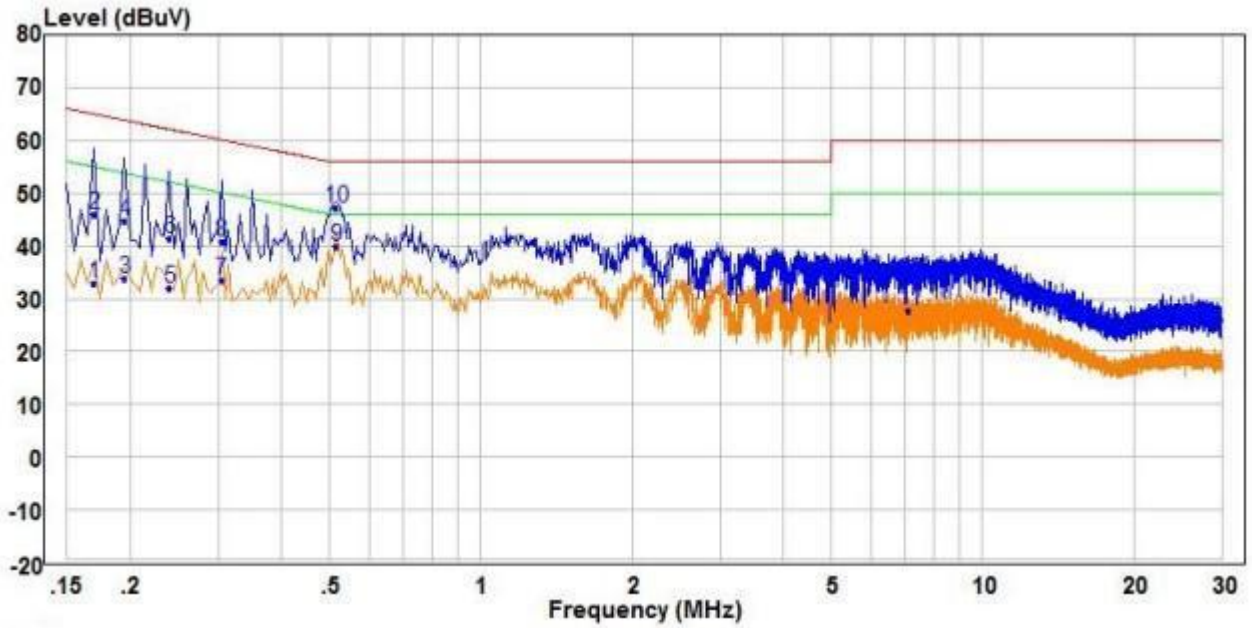
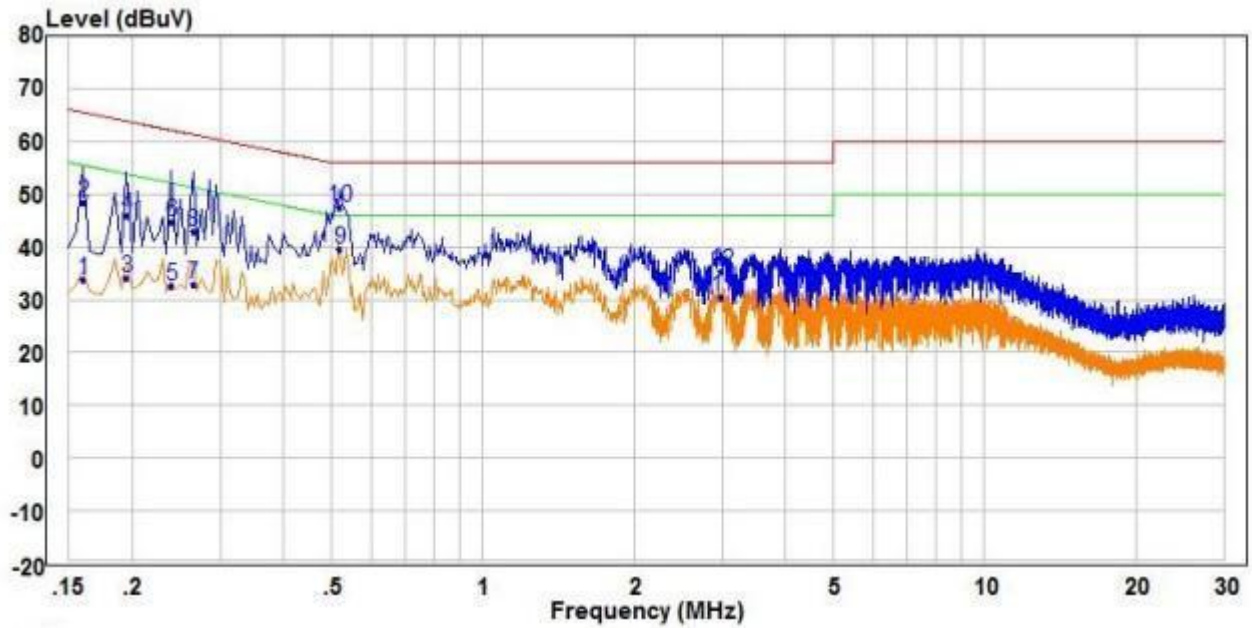


Live line:



	Read Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.170	23.32	9.66	32.98	54.96	-21.98	Average	Line
2	0.170	36.20	9.66	45.86	64.96	-19.10	QP	Line
3	0.195	24.10	9.62	33.72	53.82	-20.10	Average	Line
4	0.195	35.16	9.62	44.78	63.82	-19.04	QP	Line
5	0.240	22.38	9.56	31.94	52.10	-20.16	Average	Line
6	0.240	31.85	9.56	41.41	62.10	-20.69	QP	Line
7	0.305	23.98	9.50	33.48	50.11	-16.63	Average	Line
8	0.305	31.41	9.50	40.91	60.11	-19.20	QP	Line
9 PP	0.515	30.19	9.72	39.91	46.00	-6.09	Average	Line
10 QP	0.515	37.45	9.72	47.17	56.00	-8.83	QP	Line
11	7.115	17.79	9.80	27.59	50.00	-22.41	Average	Line
12	7.115	23.61	9.80	33.41	60.00	-26.59	QP	Line

Neutral line:



	Read Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.160	24.27	9.68	33.95	55.46	-21.51	Average	Neutral
2	0.160	38.68	9.68	48.36	65.46	-17.10	QP	Neutral
3	0.195	24.49	9.62	34.11	53.82	-19.71	Average	Neutral
4	0.195	36.21	9.62	45.83	63.82	-17.99	QP	Neutral
5	0.240	23.08	9.55	32.63	52.10	-19.47	Average	Neutral
6	0.240	35.21	9.55	44.76	62.10	-17.34	QP	Neutral
7	0.265	23.47	9.52	32.99	51.27	-18.28	Average	Neutral
8	0.265	33.42	9.52	42.94	61.27	-18.33	QP	Neutral
9 PP	0.520	29.83	9.72	39.55	46.00	-6.45	Average	Neutral
10 QP	0.520	37.67	9.72	47.39	56.00	-8.61	QP	Neutral
11	2.990	20.66	9.76	30.42	46.00	-15.58	Average	Neutral
12	2.990	25.66	9.76	35.42	56.00	-20.58	QP	Neutral

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. The 13Mbps of rate of OFDM\_5240 is the worst case, only the worst data recorded in the report.

## Appendix I): Restricted bands around fundamental frequency (Radiated Emission)

Receiver Setup:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Detector</th> <th>RBW</th> <th>VBW</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-1GHz</td> <td>Quasi-peak</td> <td>120kHz</td> <td>300kHz</td> <td>Quasi-peak</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>Peak</td> <td>1MHz</td> <td>3MHz</td> <td>Peak</td> </tr> <tr> <td>Peak</td> <td>1MHz</td> <td>10Hz</td> <td>Average</td> </tr> </tbody> </table>	Frequency	Detector	RBW	VBW	Remark	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak	Above 1GHz	Peak	1MHz	3MHz	Peak	Peak	1MHz	10Hz	Average	
Frequency	Detector	RBW	VBW	Remark																	
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak																	
Above 1GHz	Peak	1MHz	3MHz	Peak																	
	Peak	1MHz	10Hz	Average																	
Test Procedure:	<p><b>Below 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</li> </ol> <p><b>Above 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre( Above 18GHz the distance is 1 meter and table is 1.5 metre).</li> <li>Test the EUT in the lowest channel , the Highest channel</li> <li>The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.</li> <li>Repeat above procedures until all frequencies measured was complete.</li> </ol>																				
Limit:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Limit (dB<math>\mu</math>V/m @3cm)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-88MHz</td> <td>40.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>88MHz-216MHz</td> <td>43.5</td> <td>Quasi-peak Value</td> </tr> <tr> <td>216MHz-960MHz</td> <td>46.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>960MHz-1GHz</td> <td>54.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>54.0</td> <td>Average Value</td> </tr> <tr> <td>74.0</td> <td>Peak Value</td> </tr> </tbody> </table>	Frequency	Limit (dB $\mu$ V/m @3cm)	Remark	30MHz-88MHz	40.0	Quasi-peak Value	88MHz-216MHz	43.5	Quasi-peak Value	216MHz-960MHz	46.0	Quasi-peak Value	960MHz-1GHz	54.0	Quasi-peak Value	Above 1GHz	54.0	Average Value	74.0	Peak Value
Frequency	Limit (dB $\mu$ V/m @3cm)	Remark																			
30MHz-88MHz	40.0	Quasi-peak Value																			
88MHz-216MHz	43.5	Quasi-peak Value																			
216MHz-960MHz	46.0	Quasi-peak Value																			
960MHz-1GHz	54.0	Quasi-peak Value																			
Above 1GHz	54.0	Average Value																			
	74.0	Peak Value																			

Un-restricted band emissions	
Out Operating Band (MHz)	Limit
5150 - 5250	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5250 - 5350	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5470 - 5725	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5725 - 5850	<p>All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</p> <p>The graph plots EIRP (dBm/MHz) on the y-axis (ranging from -40 to 70) against Frequency (MHz) on the x-axis (ranging from 5600 to 5950). A blue line represents the limit curve. It is constant at -27 dBm/MHz from 5600 to 5650 MHz. From 5650 MHz, it rises linearly to 10 dBm/MHz at 5700 MHz. From 5700 MHz, it rises linearly to 15.6 dBm/MHz at 5725 MHz. It remains constant at 27 dBm/MHz from 5725 MHz to 5850 MHz. From 5850 MHz, it falls linearly to 15.6 dBm/MHz at 5875 MHz. From 5875 MHz, it falls linearly to 10 dBm/MHz at 5900 MHz. Finally, it remains constant at -27 dBm/MHz from 5900 MHz to 5950 MHz.</p>

**Result Table**

Test channel:				0			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5150.00	58.82	-9.2	49.62	68.2	-18.58	peak	H
5150.00	58.24	-9.2	49.04	68.2	-19.16	peak	V

Test channel:				3			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5350.00	60.23	-9.39	50.84	68.2	-17.36	peak	H
5350.00	59.49	-9.39	50.10	68.2	-18.10	peak	V

Test channel:				4			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	57.98	-9.29	48.69	68.2	-19.51	peak	H
5925	58.03	-9.29	48.74	68.2	-19.46	peak	H
5650	58.30	-9.29	49.01	68.2	-19.19	peak	V
5925	58.16	-9.29	48.87	68.2	-19.33	peak	V

Test channel:				8			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
5650	52.35	-9.29	43.06	68.2	-25.14	peak	H
5925	50.55	-9.29	41.26	68.2	-26.94	peak	H
5650	51.58	-9.29	42.29	68.2	-25.91	peak	V
5925	49.29	-9.29	40.00	68.2	-28.20	peak	V

**Note:**

1) Through Pre-scan transmitting mode with all kind of modulation and data rate, find the 13Mbps is the worst case of OFDM; and then Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

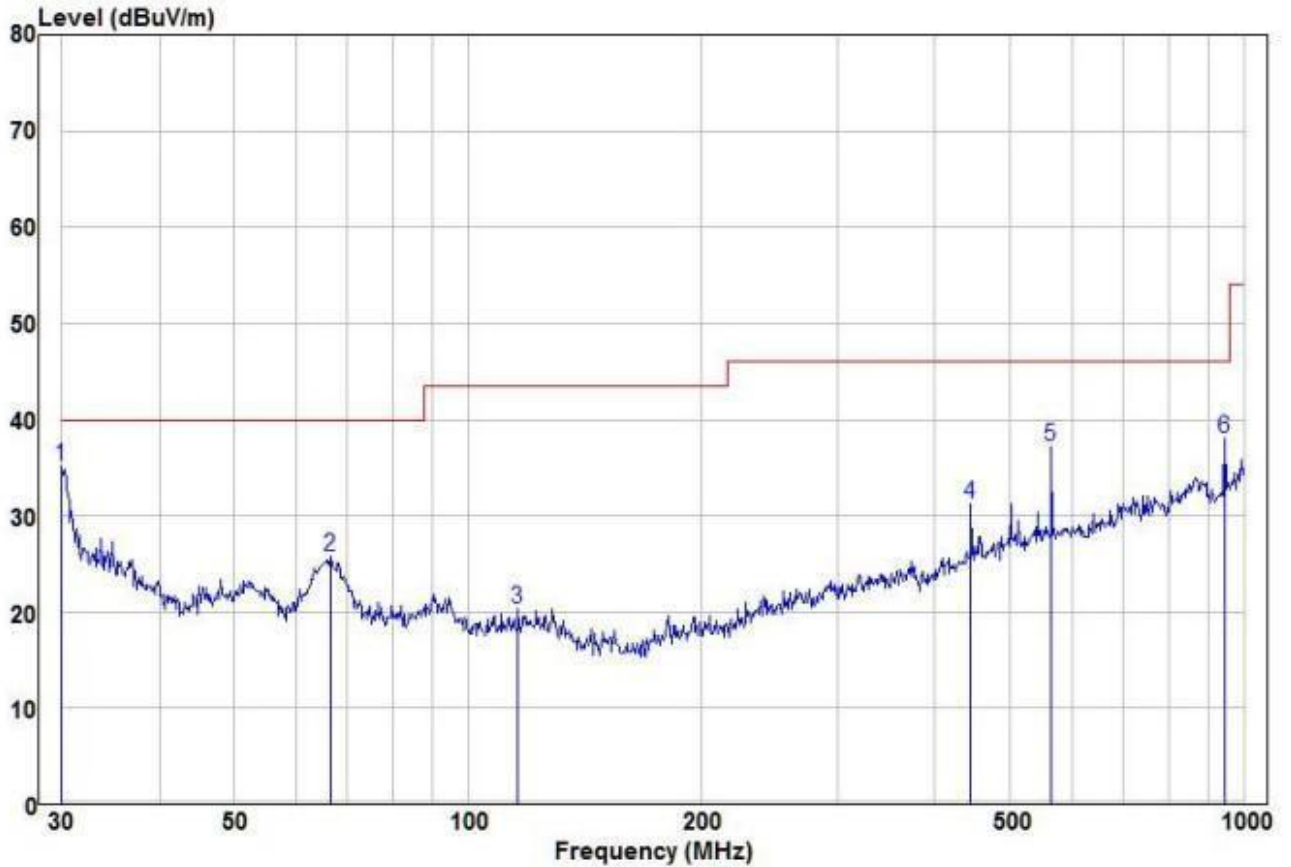
$$\text{Factor} = \text{Preamplifier Factor} - \text{Antenna Factor} - \text{Cable Factor}$$

## Appendix J): Radiated Spurious Emissions

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
Peak		1MHz	10Hz	Average	
<b>Test Procedure:</b>					
<p><b>Below 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol> <p><b>Above 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre( Above 18GHz the distance is 1 meter and table is 1.5 metre)</li> <li>Test the EUT in the lowest channel ,the middle channel ,the Highest channel</li> <li>The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.</li> <li>Repeat above procedures until all frequencies measured was complete.</li> </ol>					
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dB $\mu$ V/cm)	Remark	Measurement distance (cm)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				
Test result:	PASS				

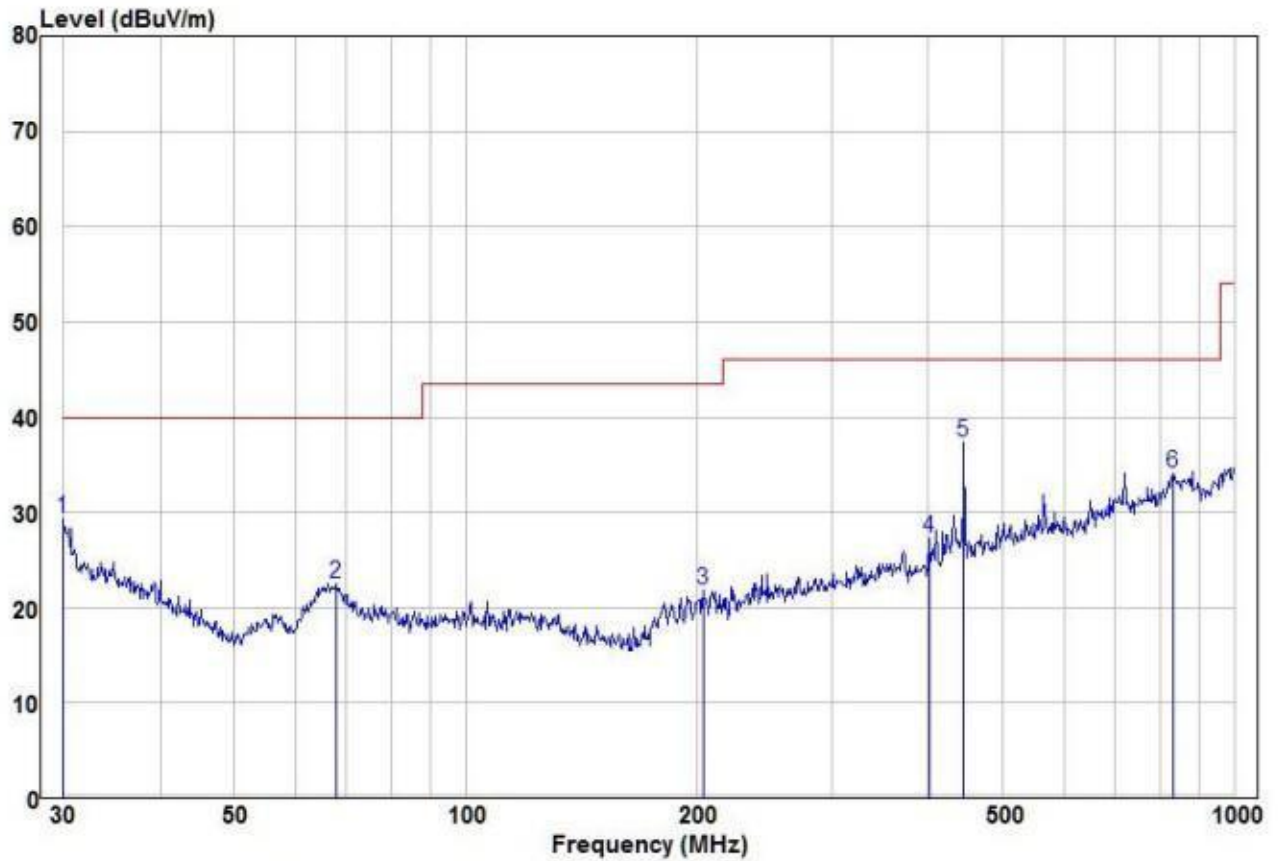
**Test Data:**  
**Radiated Emission below 1GHz**

30MHz~1GHz		
Test mode:	Transmitting	Vertical



	Read Freq	Read Level	Factor	Level	Limit	Over	Remark	Pol/Phase	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			
1	pp	30.00	19.16	15.91	35.07	40.00	-4.93	Peak	VERTICAL
2		66.50	18.72	7.05	25.77	40.00	-14.23	Peak	VERTICAL
3		116.13	9.83	10.50	20.33	43.50	-23.17	Peak	VERTICAL
4		444.85	14.61	16.57	31.18	46.00	-14.82	Peak	VERTICAL
5		564.64	18.19	18.94	37.13	46.00	-8.87	Peak	VERTICAL
6		945.44	14.51	23.62	38.13	46.00	-7.87	Peak	VERTICAL

Test mode:	Transmitting	Horizontal
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	Read Freq	Read Level	Factor	Limit Level	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	30.00	13.39	15.91	29.30	40.00	-10.70 Peak	HORIZONTAL
2	67.91	15.03	7.50	22.53	40.00	-17.47 Peak	HORIZONTAL
3	203.52	13.29	8.60	21.89	43.50	-21.61 Peak	HORIZONTAL
4	400.43	12.20	15.16	27.36	46.00	-18.64 Peak	HORIZONTAL
5	pp 444.85	20.80	16.57	37.37	46.00	-8.63 Peak	HORIZONTAL
6	833.32	10.19	23.97	34.16	46.00	-11.84 Peak	HORIZONTAL



### Transmitter Emission above 1GHz

Test mode:		OFDM(13Mbps)		Test channel:		1	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V
10440	53.03	-4.12	48.91	74	-25.09	peak	H
10440	37.74	-4.12	33.62	54	-20.38	AVG	H
15660	49.30	1.46	50.76	74	-23.24	peak	H
15660	35.10	1.46	36.56	54	-17.44	AVG	H
10440	52.58	-4.12	48.46	74	-25.54	peak	V
10440	36.84	-4.12	32.72	54	-21.28	AVG	V
15660	50.00	1.46	51.46	74	-22.54	peak	V
15660	35.80	1.46	37.26	54	-16.74	AVG	V

Remark:

- 1) The 13Mbps of rate of OFDM at 1 channel is the worst case, only the worst data recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:  
Final Test Level = Meter Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 3) Scan from 9kHz to 40GHz, The disturbance above 18GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

## 8 Photographs - EUT Test Setup

### 8.1 Radiated Spurious Emission

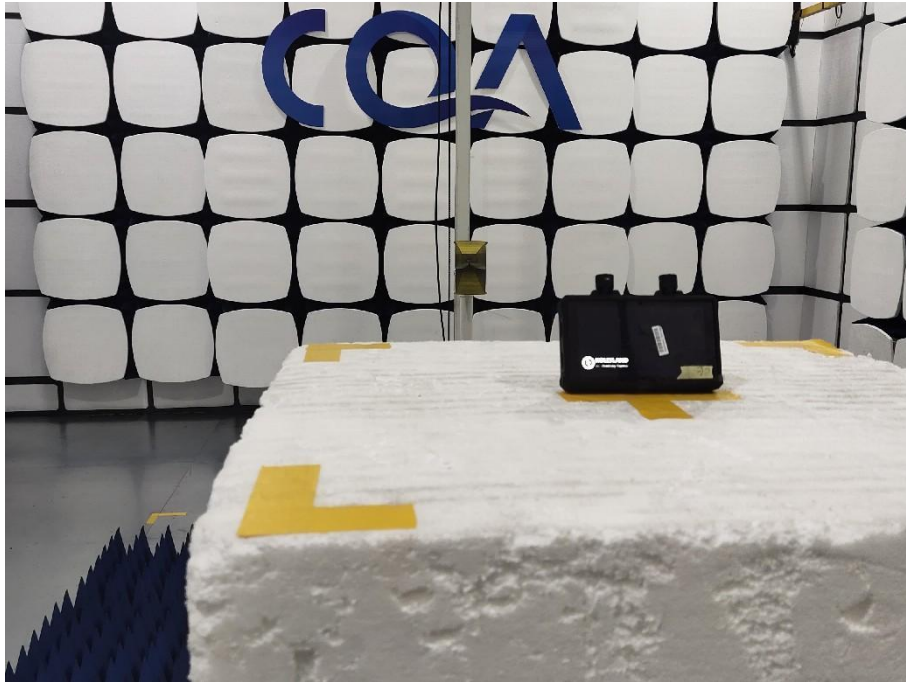
9kHz~30MHz:



30MHz~1GHz:



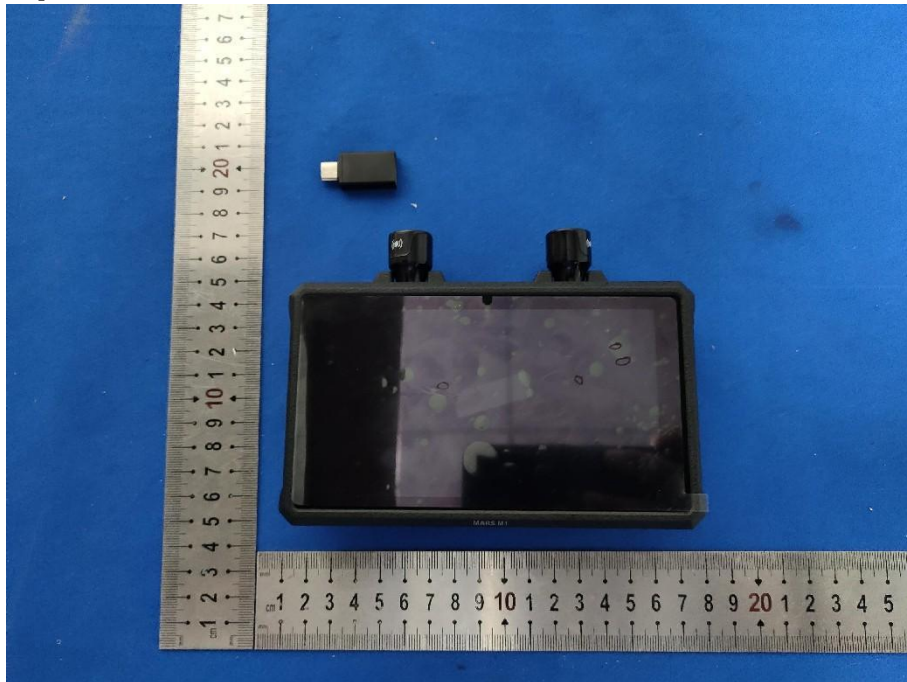
Above 1GHz:

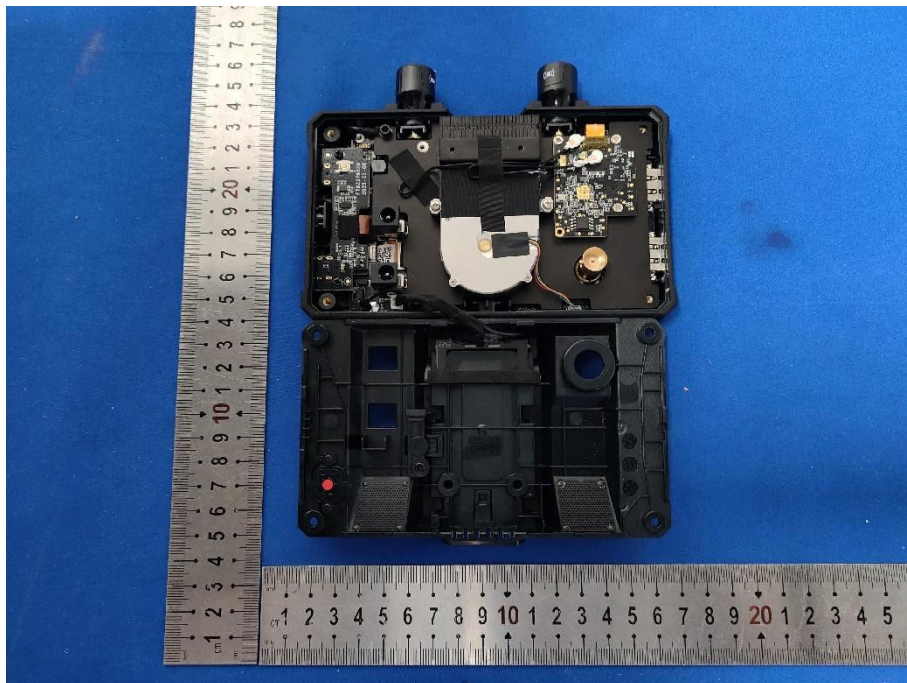
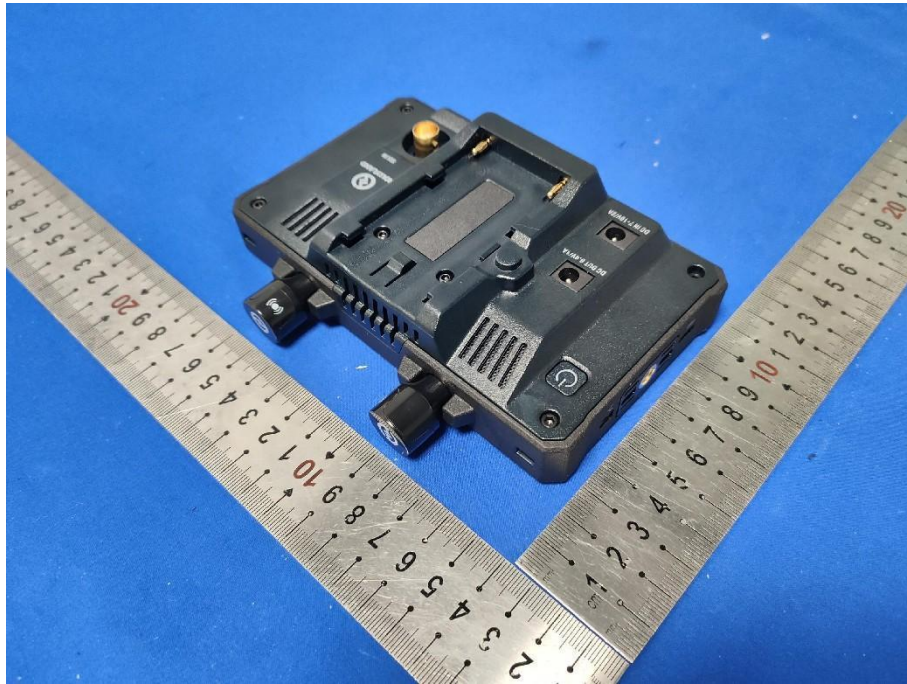


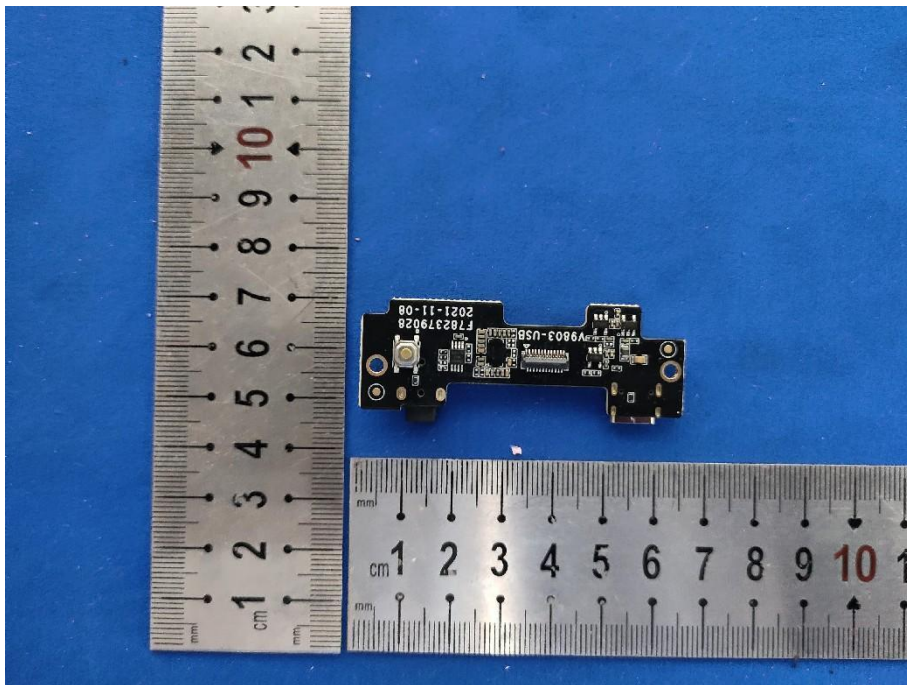
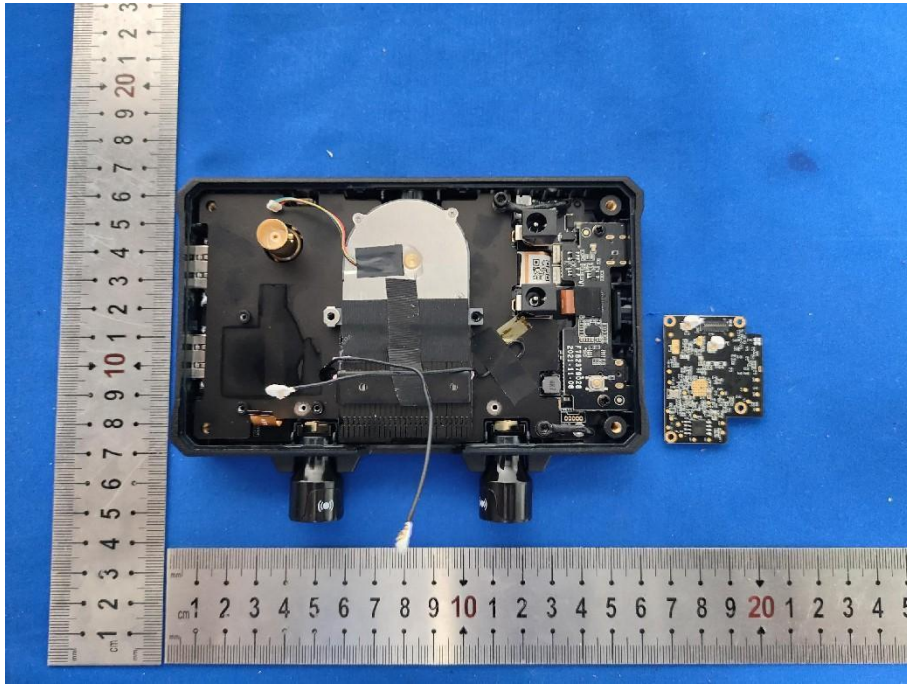
## 8.2 Conducted Emission

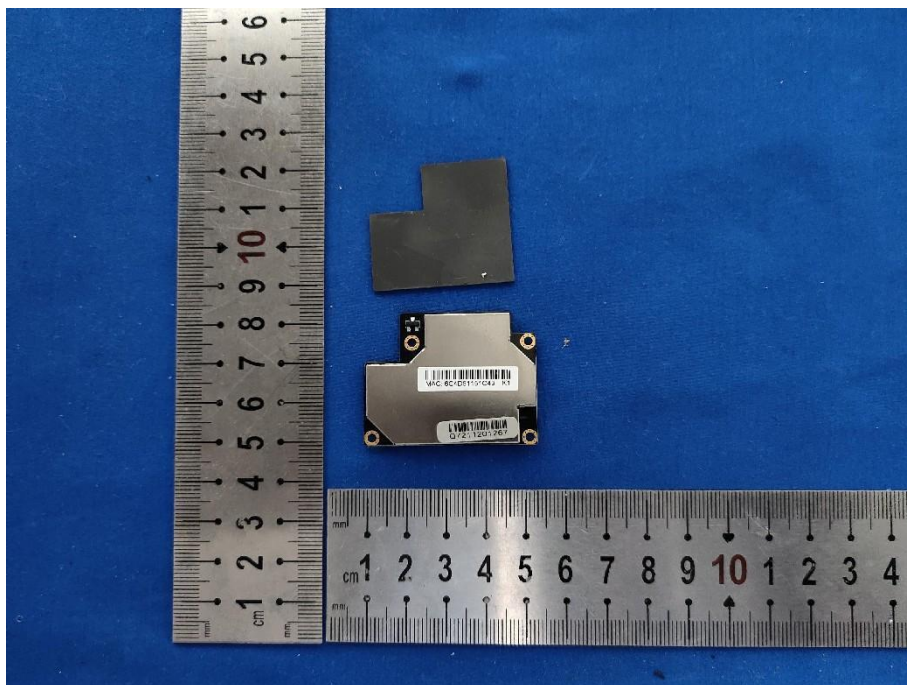
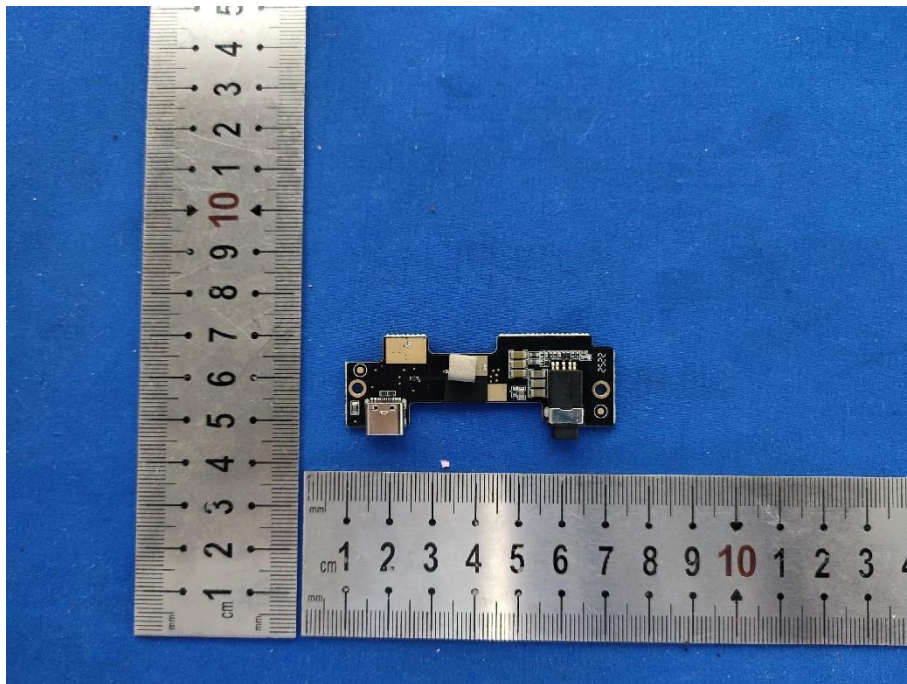


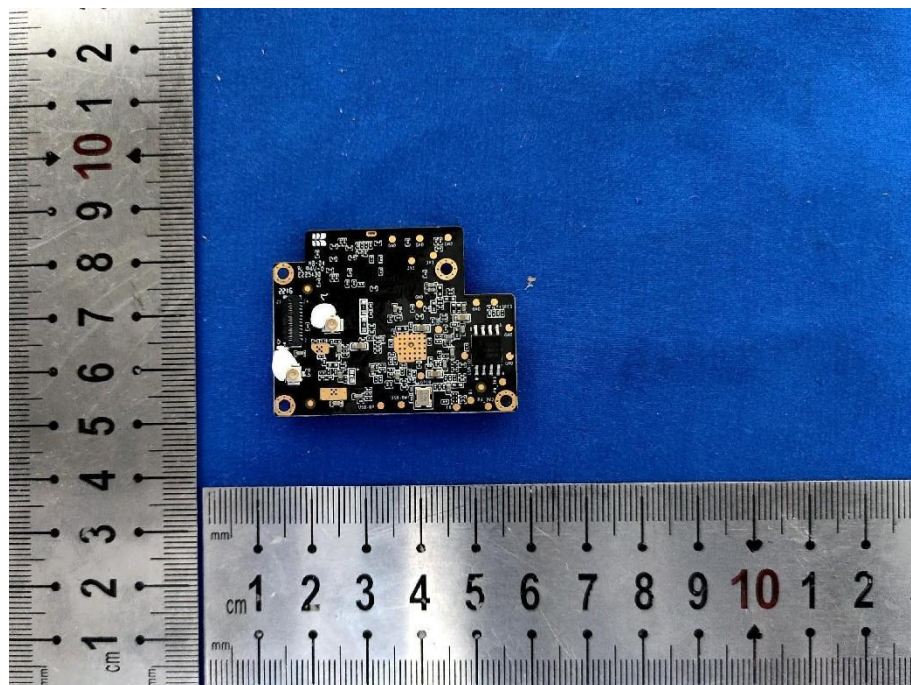
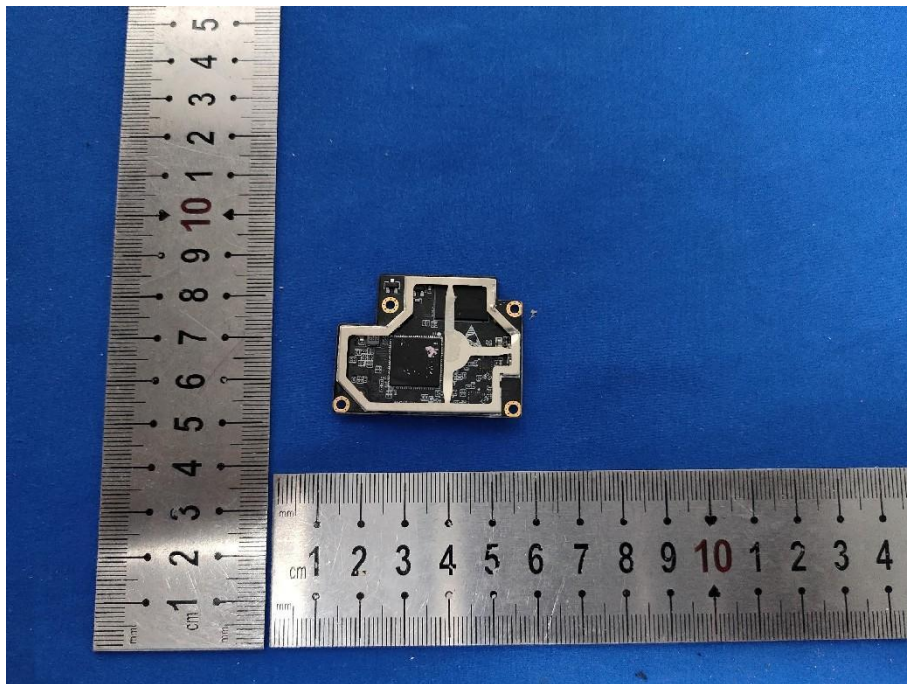
## 9 Photographs - EUT Constructional Details



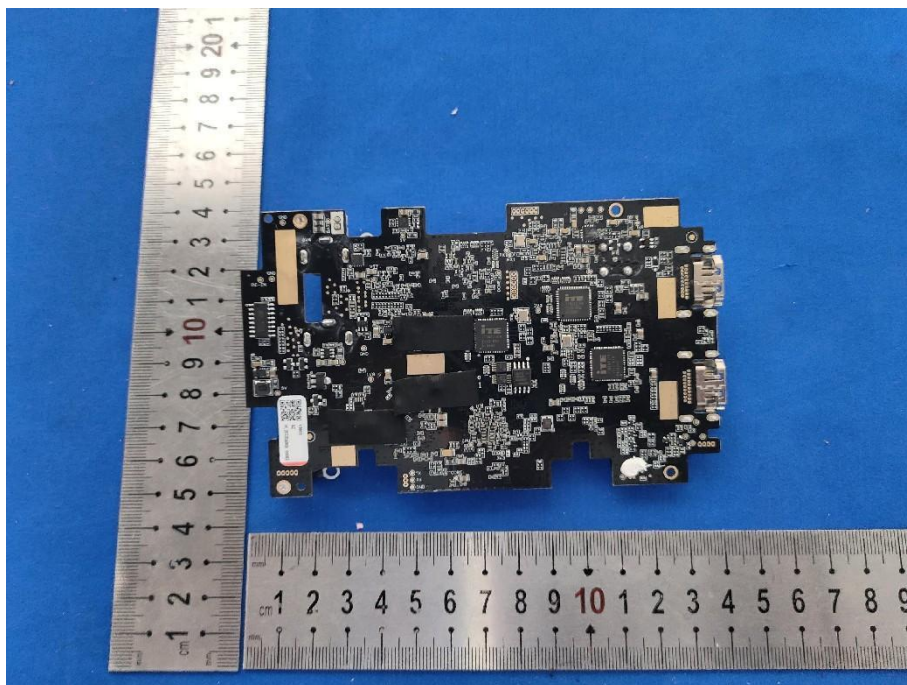
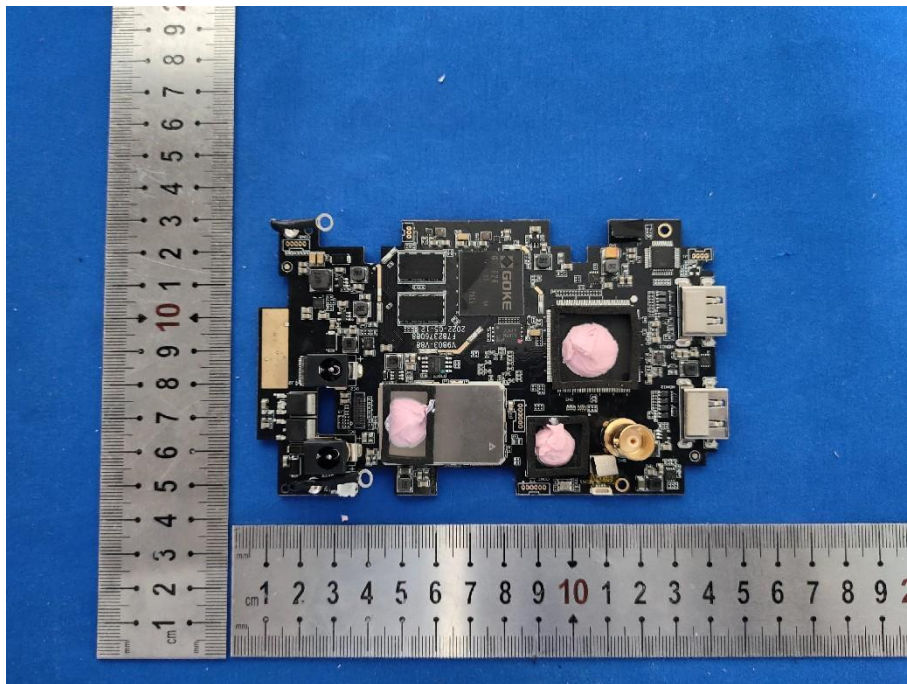














\*\*\* End of Report \*\*\*