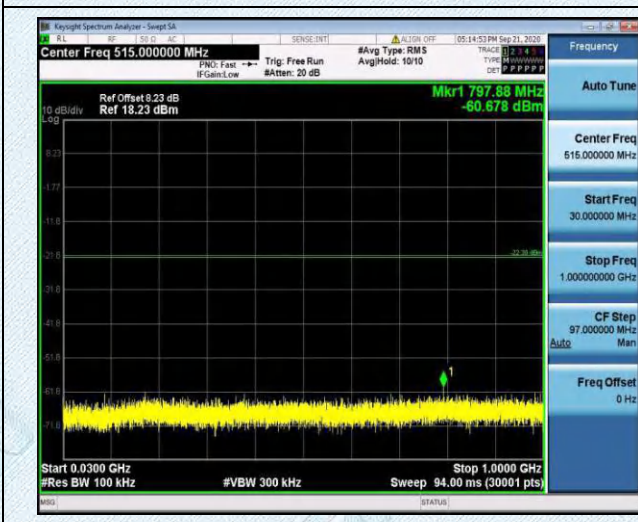


CH11-SE



802.11n(HT40)

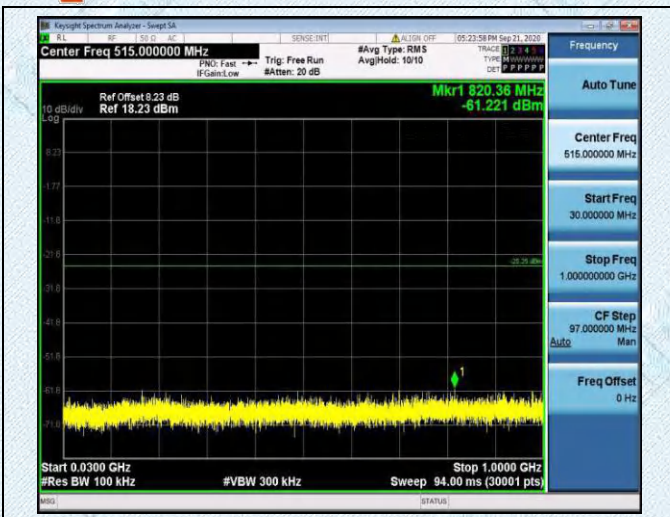
CH03-Bandedge



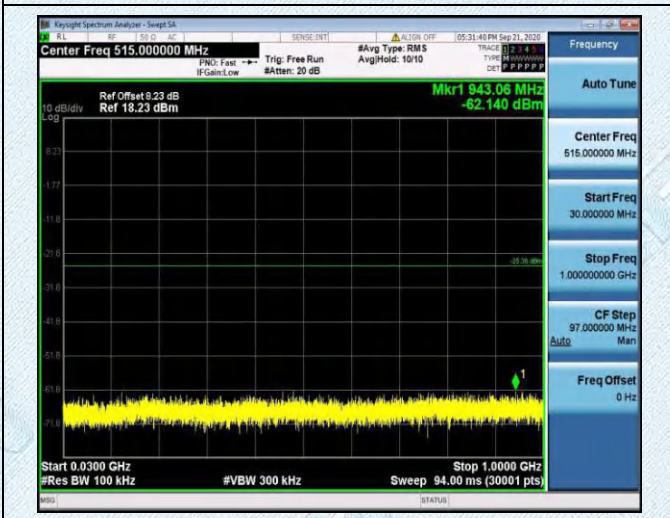
CH09-Bandedge



CH03-SE



CH06-SE



CH09-SE



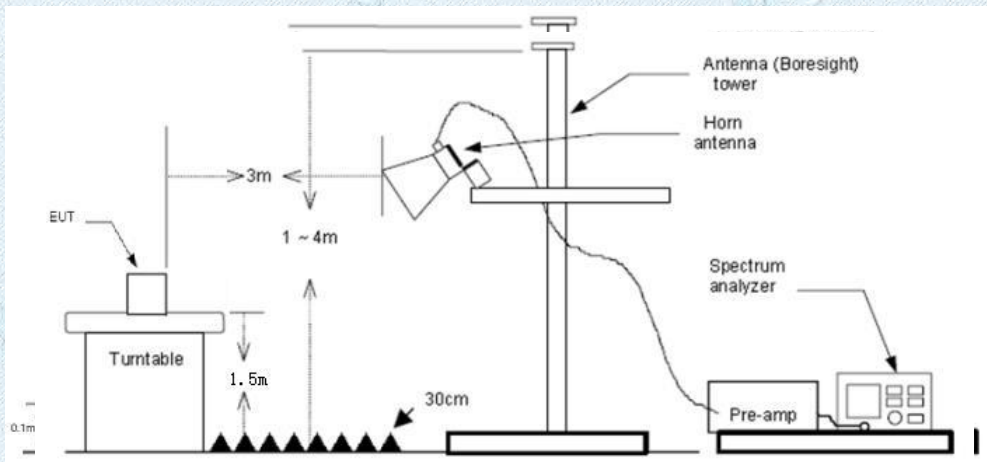
3.7. Band Edge Emissions(Radiated)

Limit

Restricted Frequency Band (MHz)	(dBuV/m)(at 3m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

Note: All restriction bands have been tested, only the worst case is reported.

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
 RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
 RBW=1MHz, VBW=10Hz with Average detector for Average Value.

Test Mode

Please refer to the clause 2.3.

Test Results

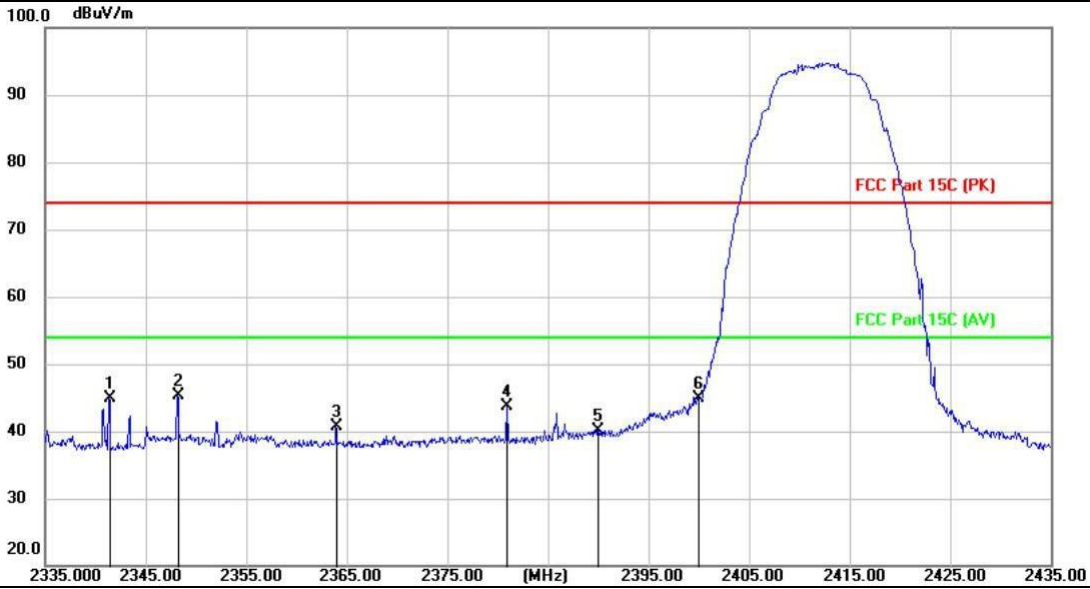
Note:

1.Measurement = Reading level + Correct Factor

Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

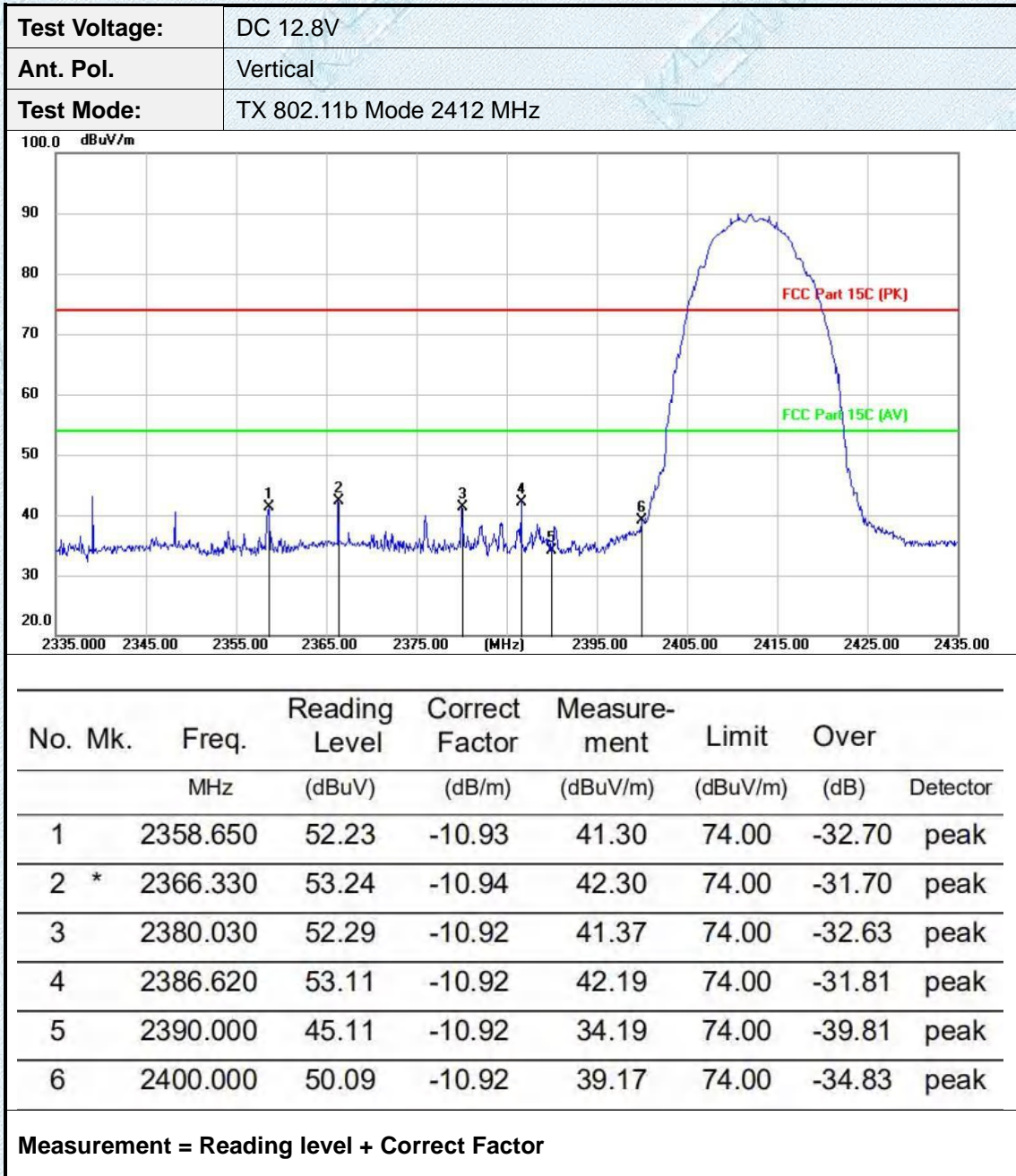
2.Pre-scan 802.11b, 802.11g, 802.11n(HT20) and 802.11n(HT40) mode, and found the 802.11b mode which it is worse case, so only show the test data for worse case.

Test Voltage:	DC 12.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2412MHz

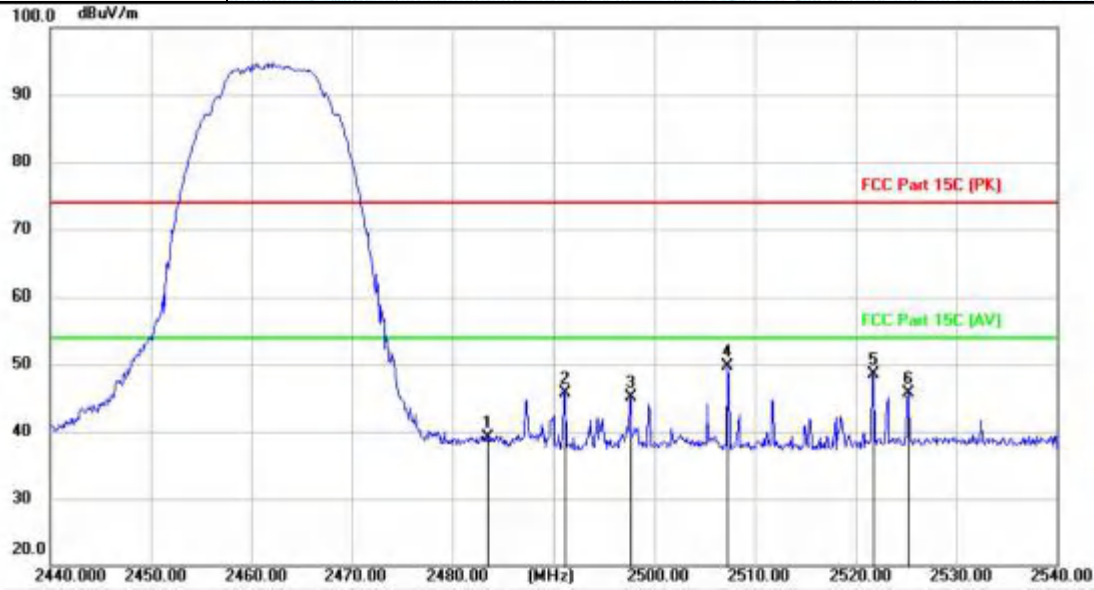


No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		2341.360	55.89	-10.94	44.95	74.00	-29.05	peak
2	*	2348.120	56.19	-10.93	45.26	74.00	-28.74	peak
3		2363.920	51.65	-10.93	40.72	74.00	-33.28	peak
4		2380.900	54.58	-10.93	43.65	74.00	-30.35	peak
5		2390.000	50.95	-10.92	40.03	74.00	-33.97	peak
6		2400.000	55.89	-10.92	44.97	74.00	-29.03	peak

Measurement = Reading level + Correct Factor

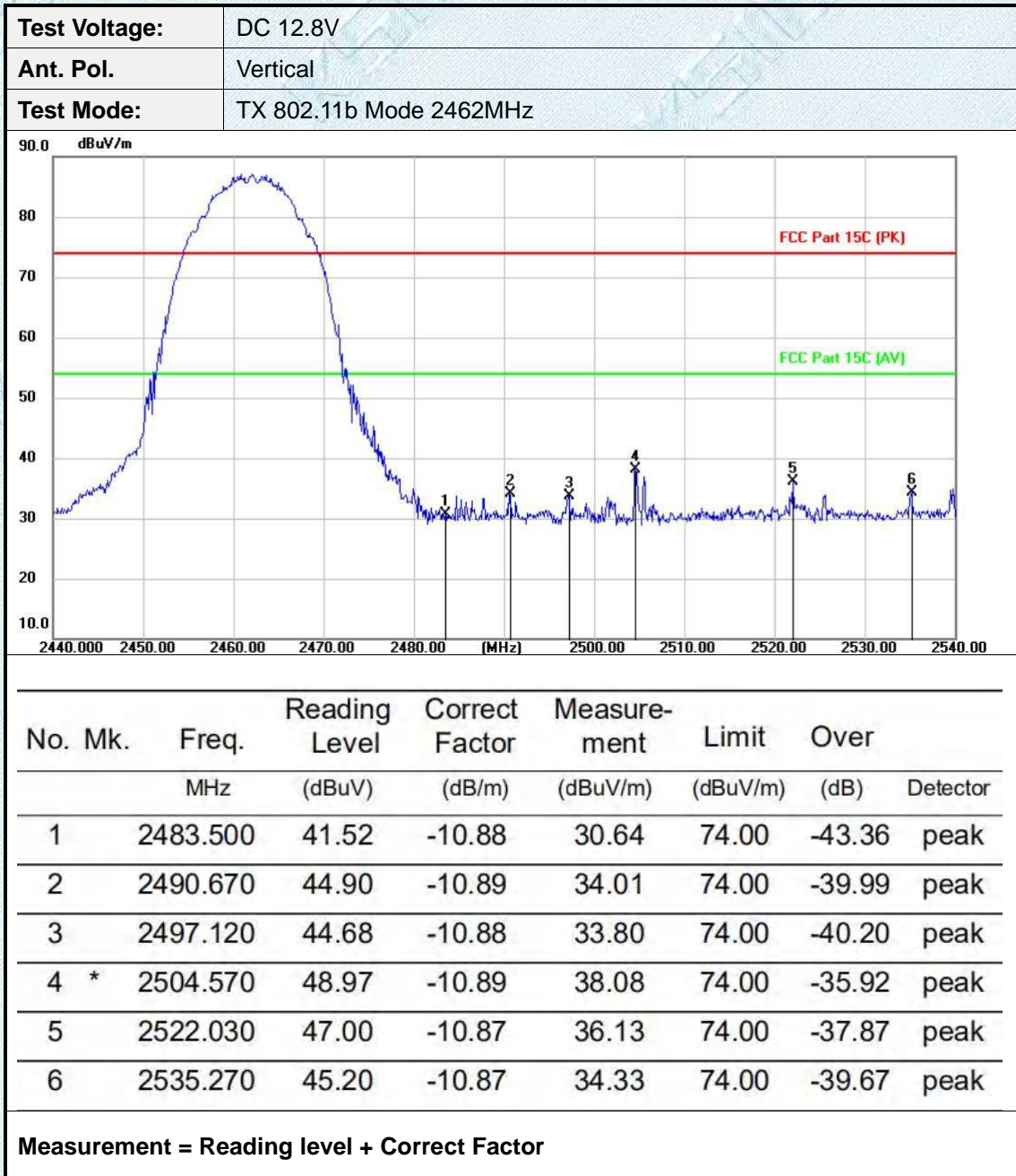


Test Voltage:	DC 12.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2462MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		2483.500	49.96	-10.88	39.08	74.00	-34.92	peak
2		2491.010	56.60	-10.89	45.71	74.00	-28.29	peak
3		2497.620	55.93	-10.88	45.05	74.00	-28.95	peak
4	*	2507.230	60.62	-10.87	49.75	74.00	-24.25	peak
5		2521.780	59.38	-10.87	48.51	74.00	-25.49	peak
6		2525.290	56.65	-10.87	45.78	74.00	-28.22	peak

Measurement = Reading level + Correct Factor



3.8. Spurious Emission (Radiated)

Limit

Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

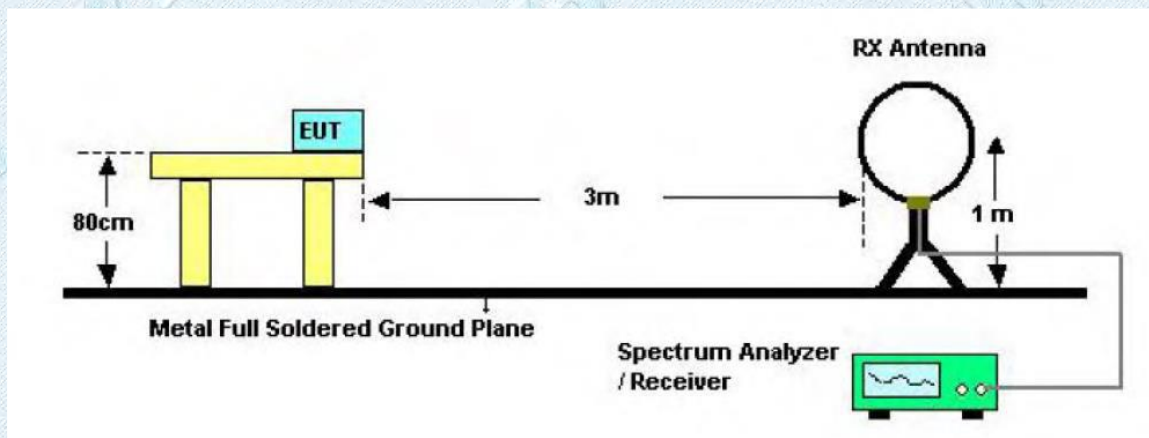
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Distance Meters(at 3m)	
	Peak	Average
Above 1000	74	54

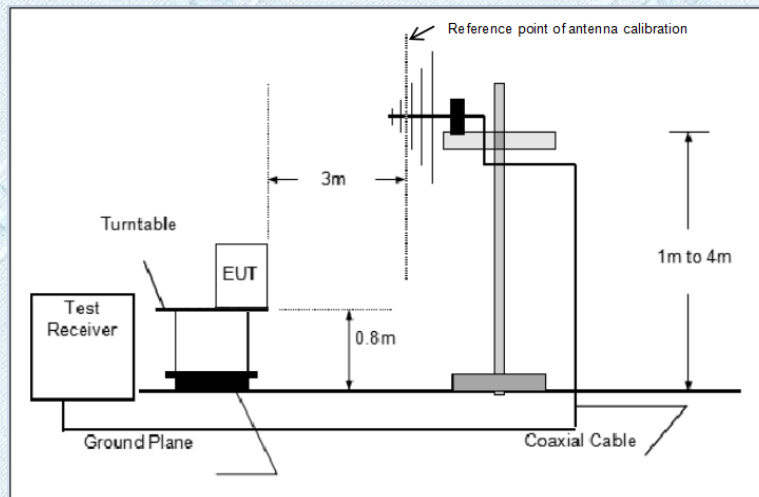
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

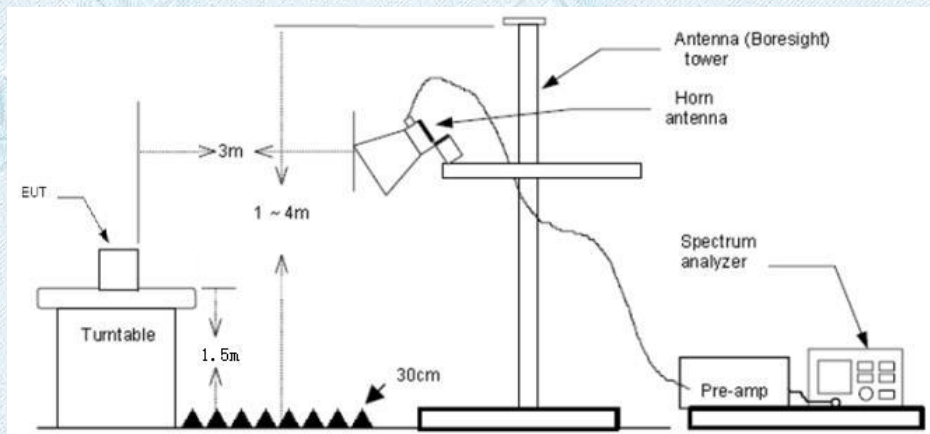
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 1 GHz:
 RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
 If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - (3) From 1 GHz to 10th harmonic:
 RBW=1MHz, VBW=1MHz Peak detector for Peak value.
 RBW=1MHz, VBW=10Hz RMS detector for Average value.

Test Mode

Please refer to the clause 2.3.

Test Result**9 KHz~30 MHz and 18GHz~25GHz**

From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

Note:


- 1) Measurement = Reading level + Correct Factor
Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
- 2) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
- 3) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4) The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
- 5) Pre-scan 802.11b/g/n(HT20/HT40) modulation, and found the 802.11b modulation 2412MHz which it is worse case for 30MHz-1GHz , so only show the test data for worse case.
- 6) Pre-scan 802.11b/g/n(HT20/HT40) modulation, and found the 802.11b modulation which it is worse case for above 1GHz, so only show the test data for worse case.

BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

30MHz-1GHz

Test Voltage:	DC 12.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2412MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		191.0738	34.10	-12.51	21.59	43.50	-21.91	QP
2		229.2931	29.61	-10.76	18.85	46.00	-27.15	QP
3		325.5958	36.85	-7.67	29.18	46.00	-16.82	QP
4		350.4768	31.68	-6.60	25.08	46.00	-20.92	QP
5	*	574.6258	36.92	-1.61	35.31	46.00	-10.69	QP
6		654.2318	36.05	-0.95	35.10	46.00	-10.90	QP

Measurement = Reading Level+ Correct Factor

Test Voltage:	DC 12.8V
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2412MHz

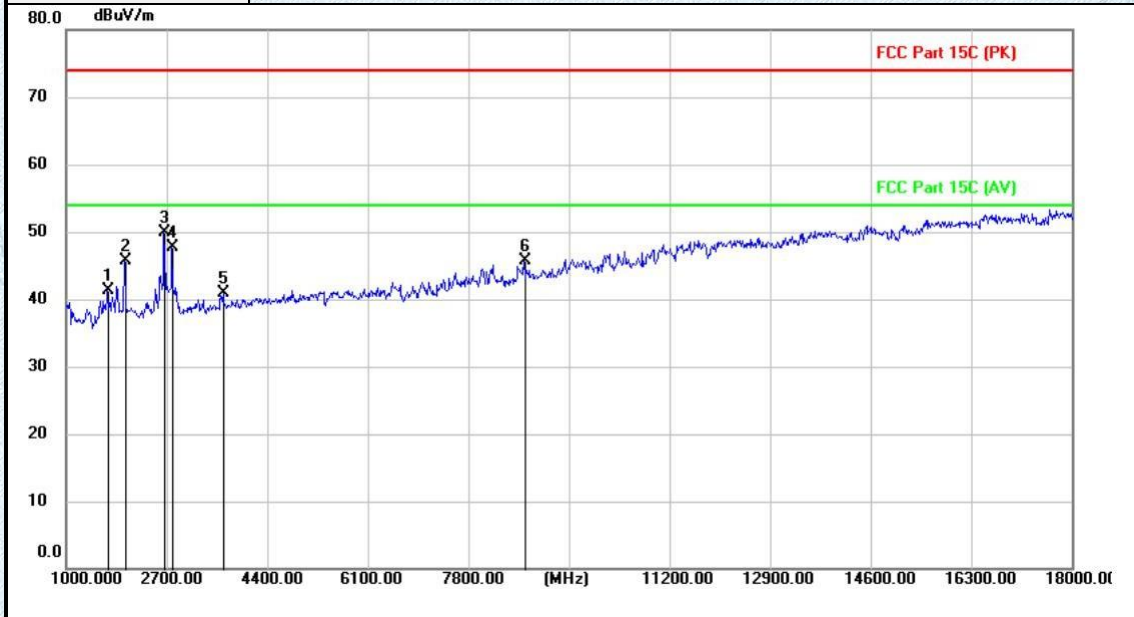


No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		311.0867	36.08	-8.29	27.79	46.00	-18.21	QP
2		330.1949	38.54	-7.47	31.07	46.00	-14.93	QP
3		417.6411	31.10	-4.78	26.32	46.00	-19.68	QP
4		568.6127	32.31	-1.82	30.49	46.00	-15.51	QP
5		609.9217	32.34	-0.77	31.57	46.00	-14.43	QP
6	*	638.3686	32.63	-0.88	31.75	46.00	-14.25	QP

Measurement = Reading Level+ Correct Factor

Adobe 1GHz

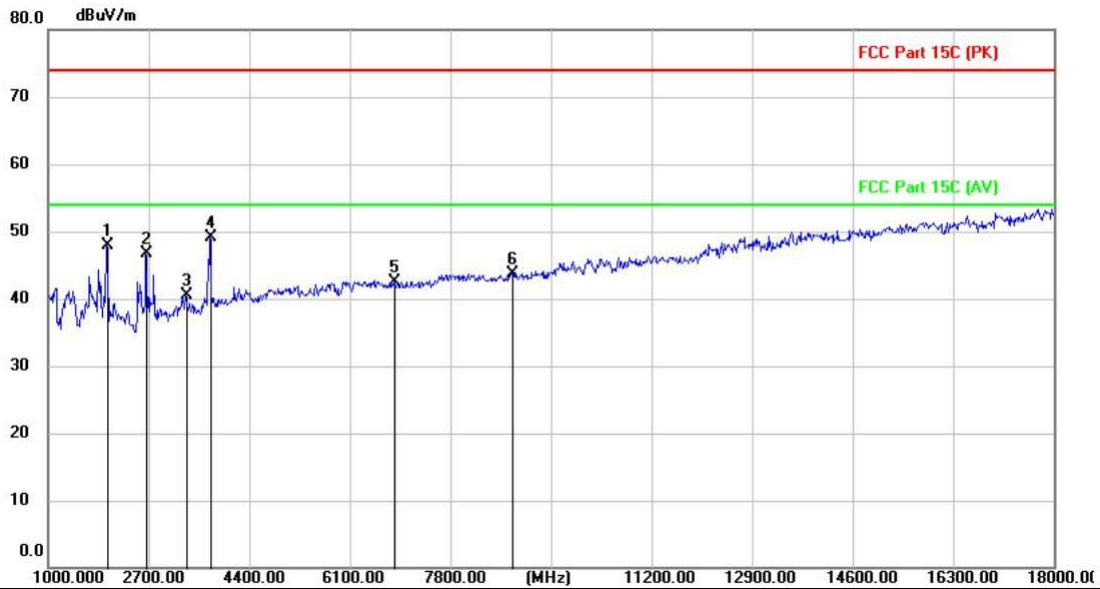
Test Voltage:	DC 12.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2412MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1708.900	52.63	-11.40	41.23	74.00	-32.77	peak
2		1996.200	56.75	-11.06	45.69	74.00	-28.31	peak
3	*	2662.600	60.62	-10.79	49.83	74.00	-24.17	peak
4		2795.200	58.40	-10.71	47.69	74.00	-26.31	peak
5		3657.100	50.12	-9.28	40.84	74.00	-33.16	peak
6		8738.400	43.76	1.88	45.64	74.00	-28.36	peak

Measurement = Reading level + Correct Factor

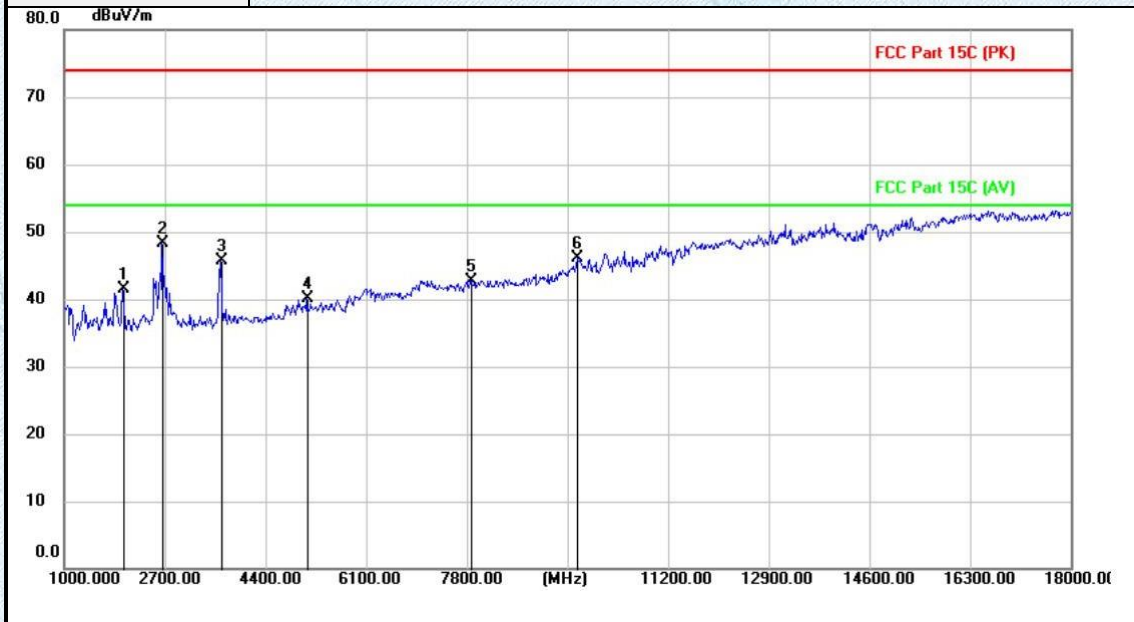
Test Voltage:	DC 12.8V
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2412MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1999.600	59.00	-11.06	47.94	74.00	-26.06	peak
2		2660.900	57.49	-10.79	46.70	74.00	-27.30	peak
3		3330.700	50.54	-9.98	40.56	74.00	-33.44	peak
4	*	3750.600	58.09	-9.05	49.04	74.00	-24.96	peak
5		6861.600	43.64	-1.10	42.54	74.00	-31.46	peak
6		8852.300	41.85	1.85	43.70	74.00	-30.30	peak

Measurement = Reading level + Correct Factor

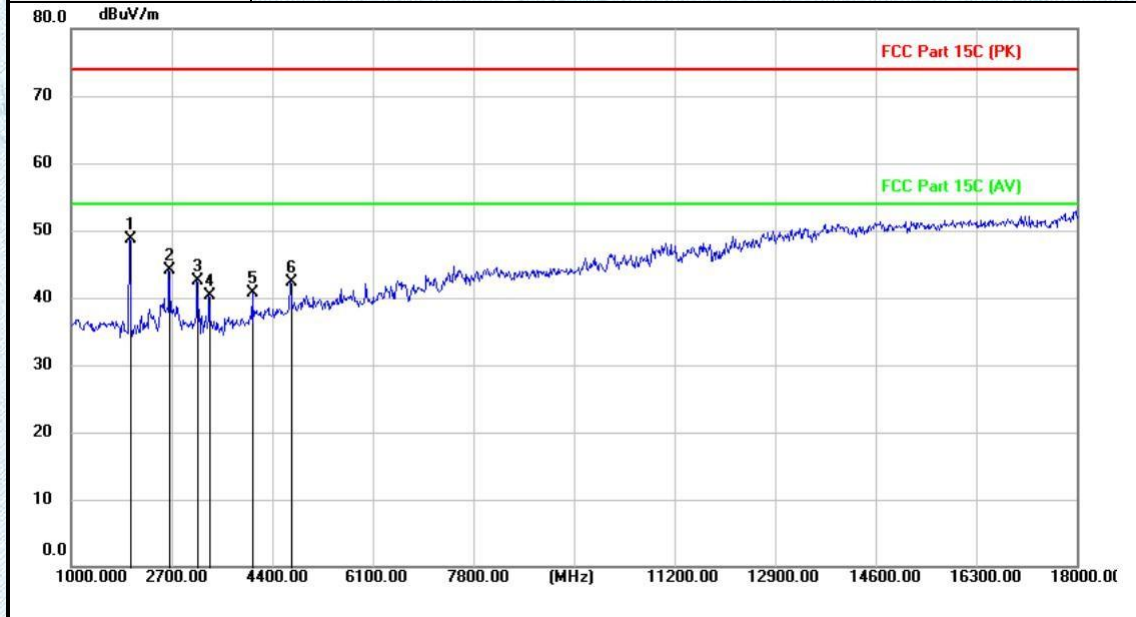
Test Voltage:	DC 12.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2437MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1996.200	52.47	-11.06	41.41	74.00	-32.59	peak
2	*	2664.300	59.11	-10.79	48.32	74.00	-25.68	peak
3		3643.500	55.12	-9.33	45.79	74.00	-28.21	peak
4		5107.200	45.49	-5.29	40.20	74.00	-33.80	peak
5		7864.600	40.97	1.74	42.71	74.00	-31.29	peak
6		9670.000	42.72	3.34	46.06	74.00	-27.94	peak

Measurement = Reading level + Correct Factor

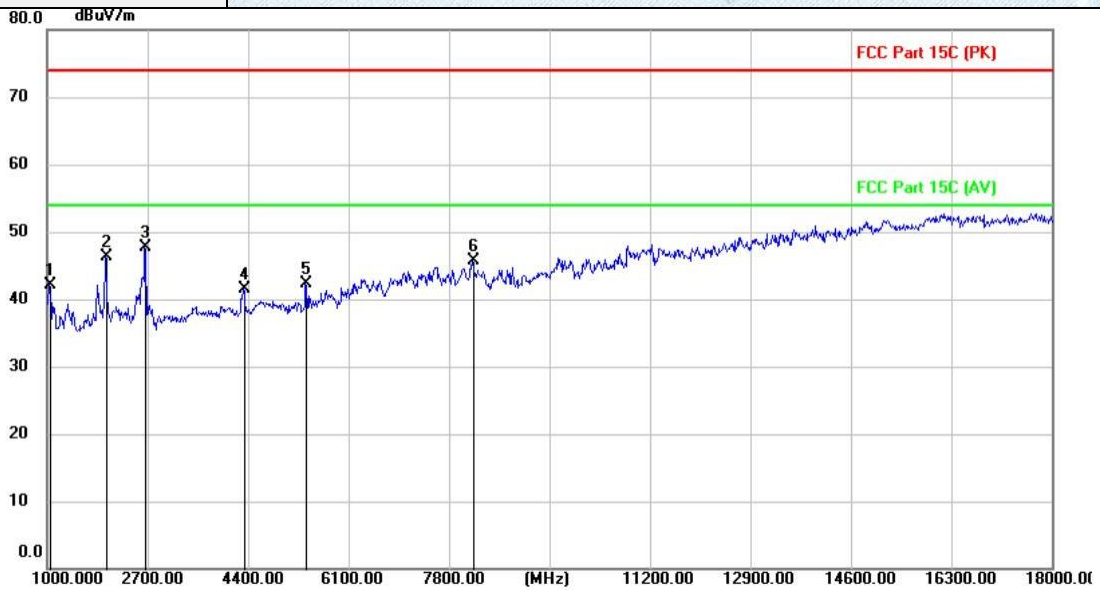
Test Voltage:	DC 12.8V
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2437MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1	*	1999.600	59.70	-11.06	48.64	74.00	-25.36	peak
2		2657.500	54.98	-10.78	44.20	74.00	-29.80	peak
3		3135.200	52.78	-10.34	42.44	74.00	-31.56	peak
4		3330.700	50.23	-9.98	40.25	74.00	-33.75	peak
5		4075.300	48.85	-8.18	40.67	74.00	-33.33	peak
6		4711.100	48.53	-6.18	42.35	74.00	-31.65	peak

Measurement = Reading level + Correct Factor

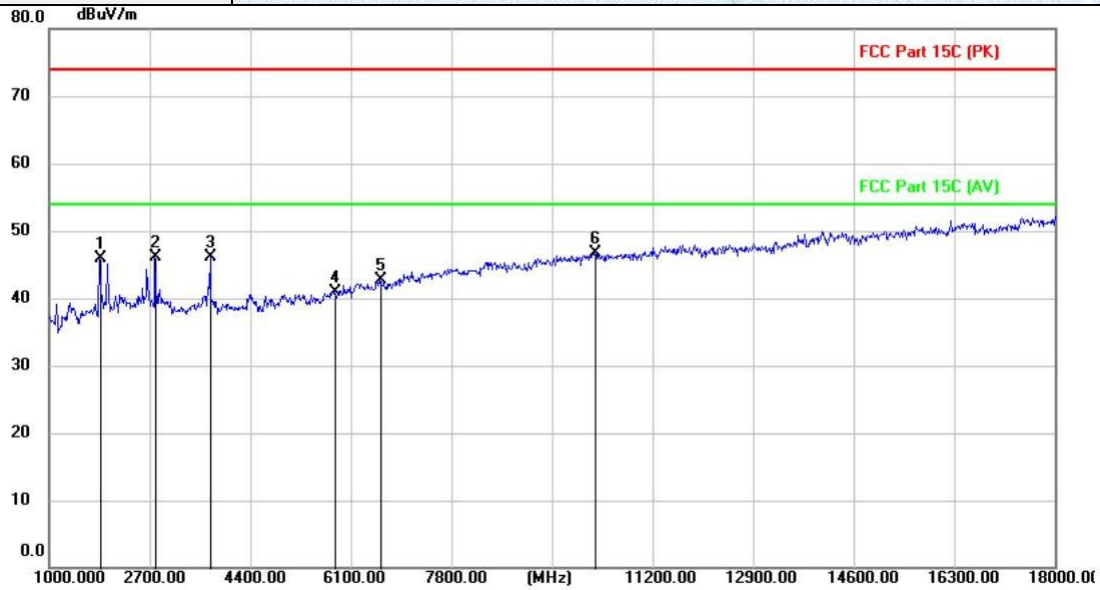
Test Voltage:	DC 12.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2462MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1044.200	54.55	-12.36	42.19	74.00	-31.81	peak
2		1997.900	57.38	-11.06	46.32	74.00	-27.68	peak
3	*	2655.800	58.48	-10.78	47.70	74.00	-26.30	peak
4		4323.500	48.76	-7.34	41.42	74.00	-32.58	peak
5		5370.700	47.41	-5.06	42.35	74.00	-31.65	peak
6		8204.600	43.77	2.01	45.78	74.00	-28.22	peak

Measurement = Reading level + Correct Factor

Test Voltage:	DC 12.8V
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2462MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1860.200	57.04	-11.18	45.86	74.00	-28.14	peak
2		2790.100	56.88	-10.71	46.17	74.00	-27.83	peak
3		3726.800	55.21	-9.12	46.09	74.00	-27.91	peak
4		5824.600	45.15	-4.20	40.95	74.00	-33.05	peak
5		6606.600	44.57	-1.82	42.75	74.00	-31.25	peak
6	*	10215.700	42.19	4.44	46.63	74.00	-27.37	peak

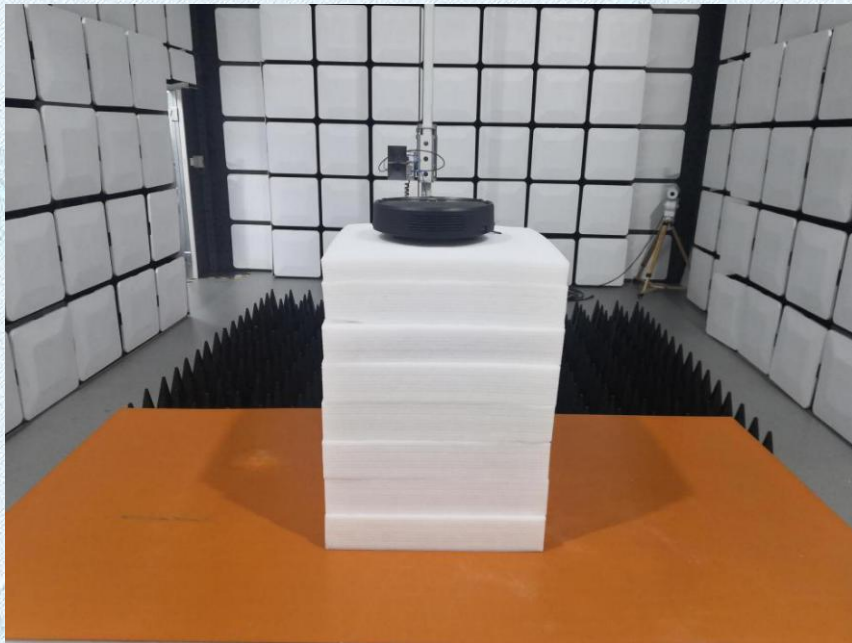
Measurement = Reading level + Correct Factor

4.EUT TEST PHOTOS

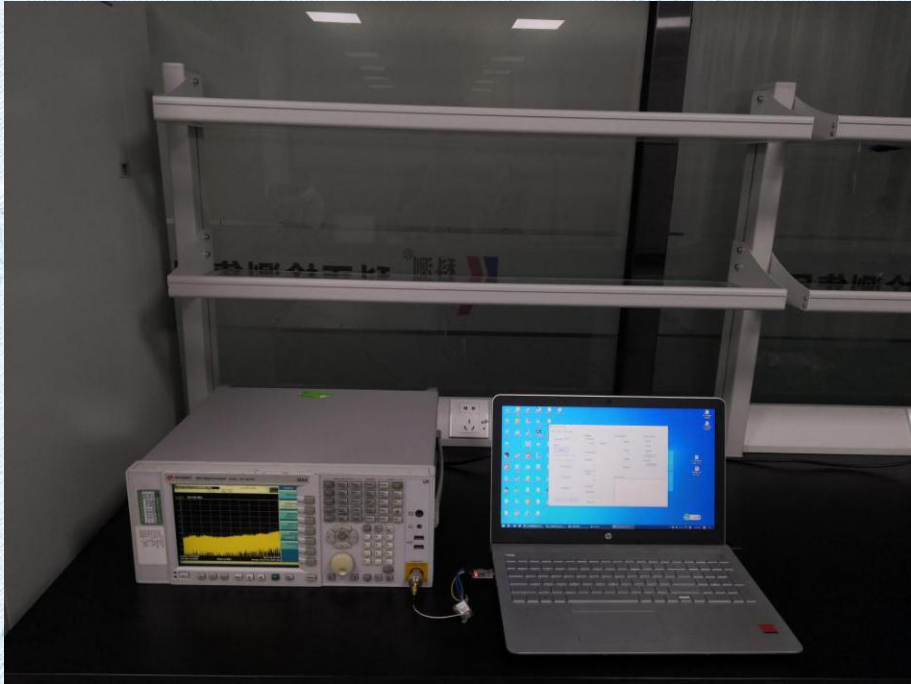
Radiated Emissions (30MHz~1000MHz)



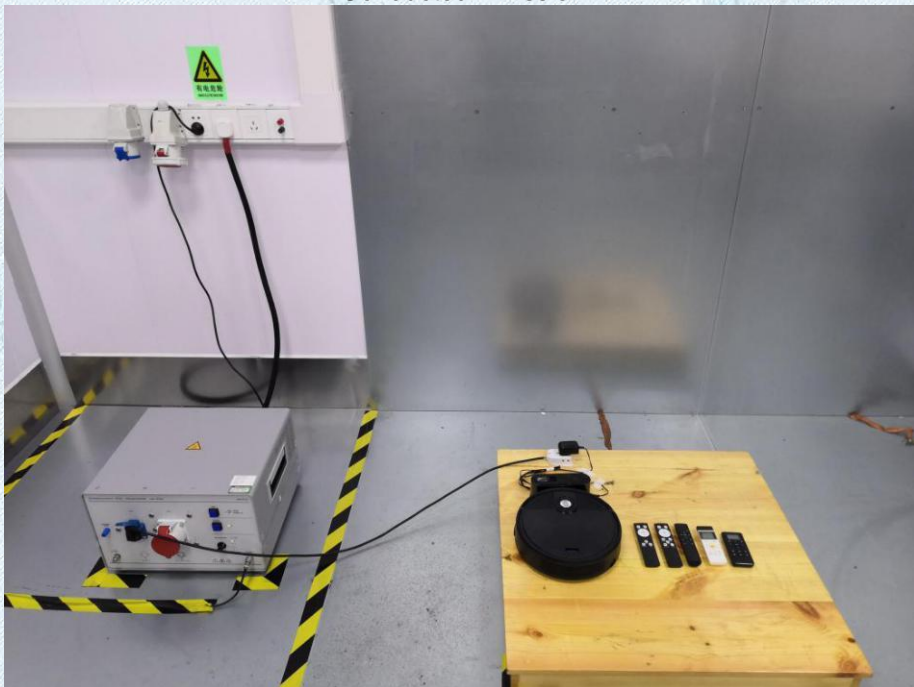
Radiated Emissions (Above 1GHz)



RF Conducted



Conducted Emission



5.PHOTOGRAPHS OF EUT CONSTRUCTIONAL

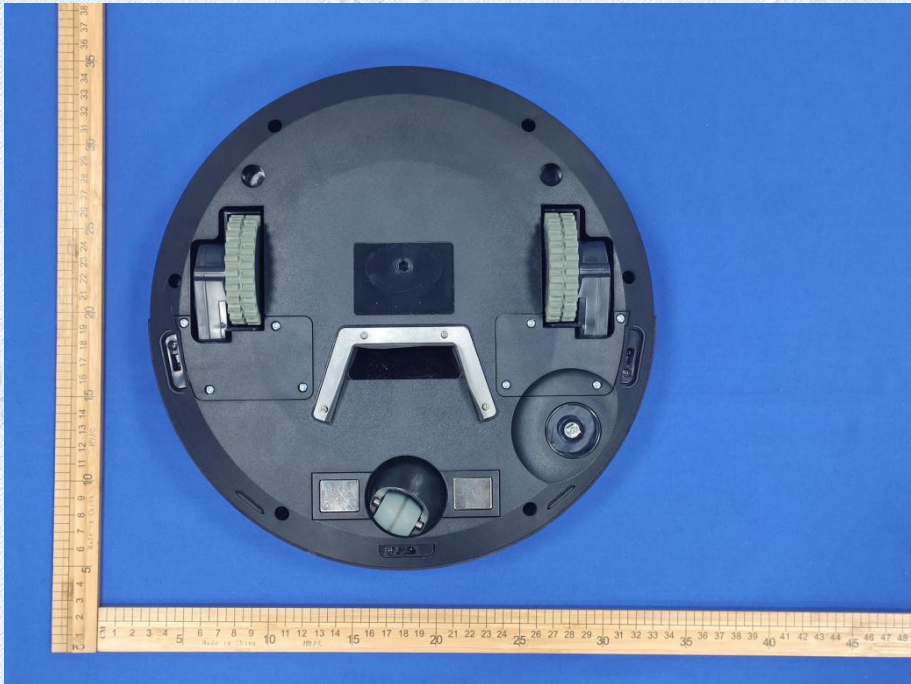
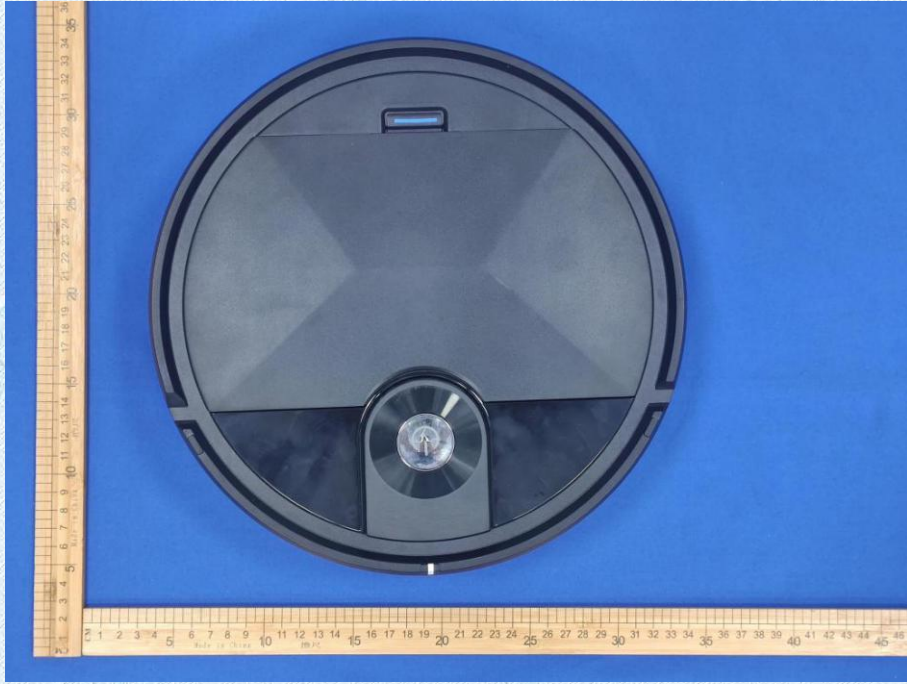
External Photographs

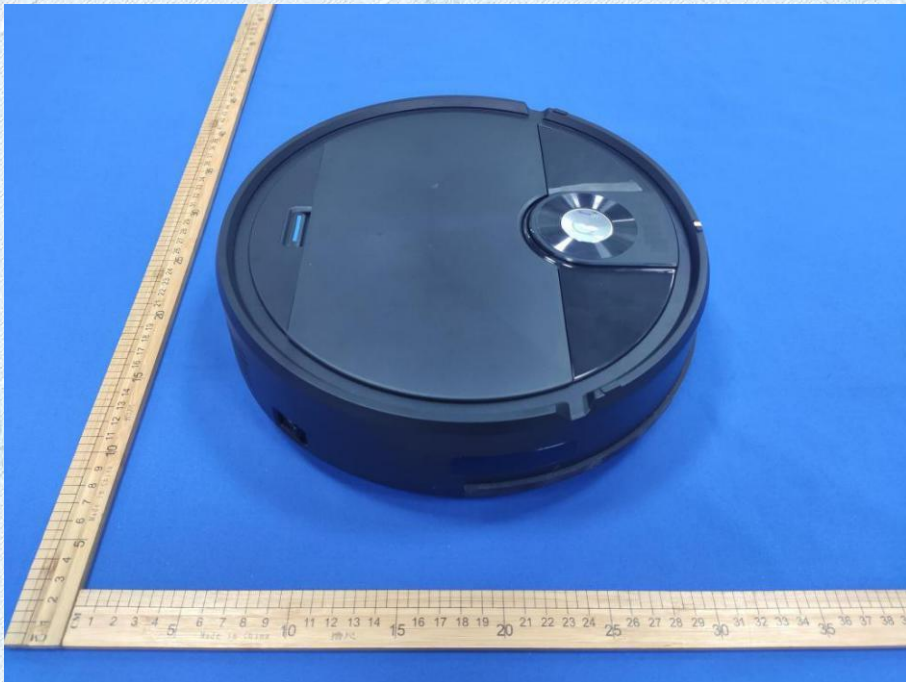
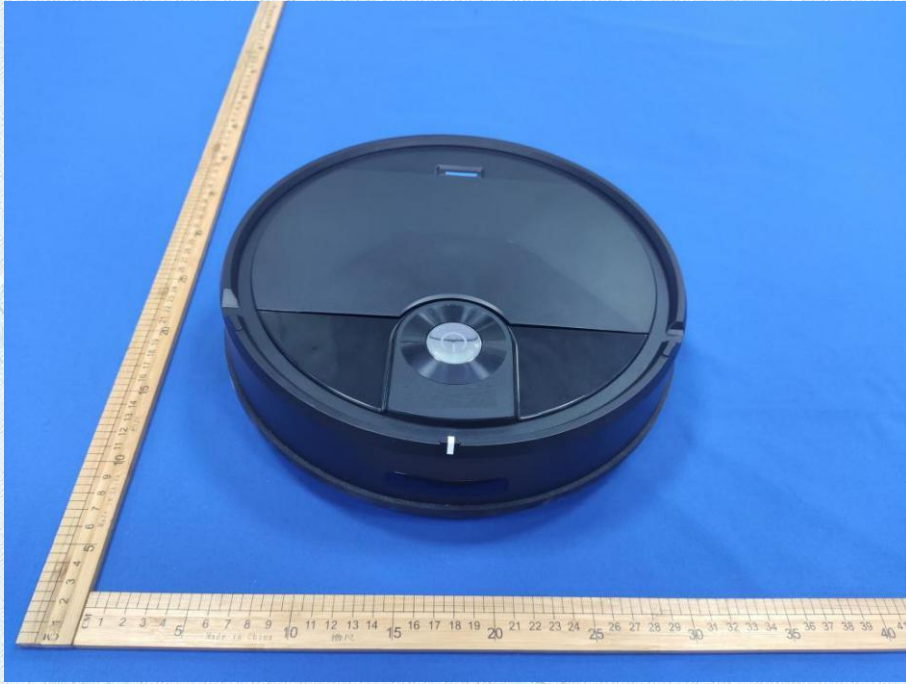
Outlook of MT-210; MT-220; MT-230; MT-240

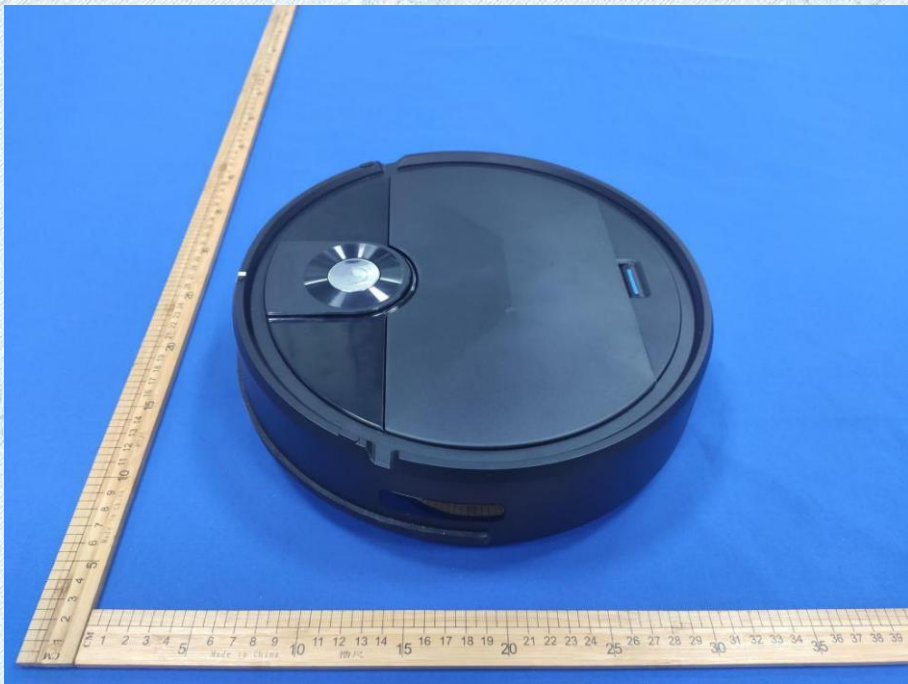


Outlook of MT-250; MT-260; MT-270; MT-280; MT-290











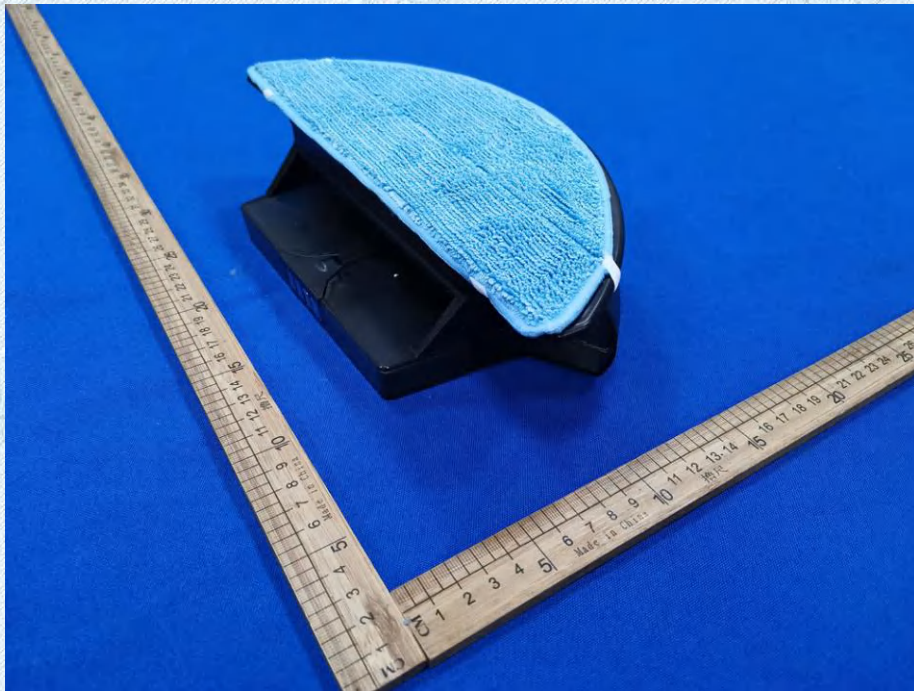




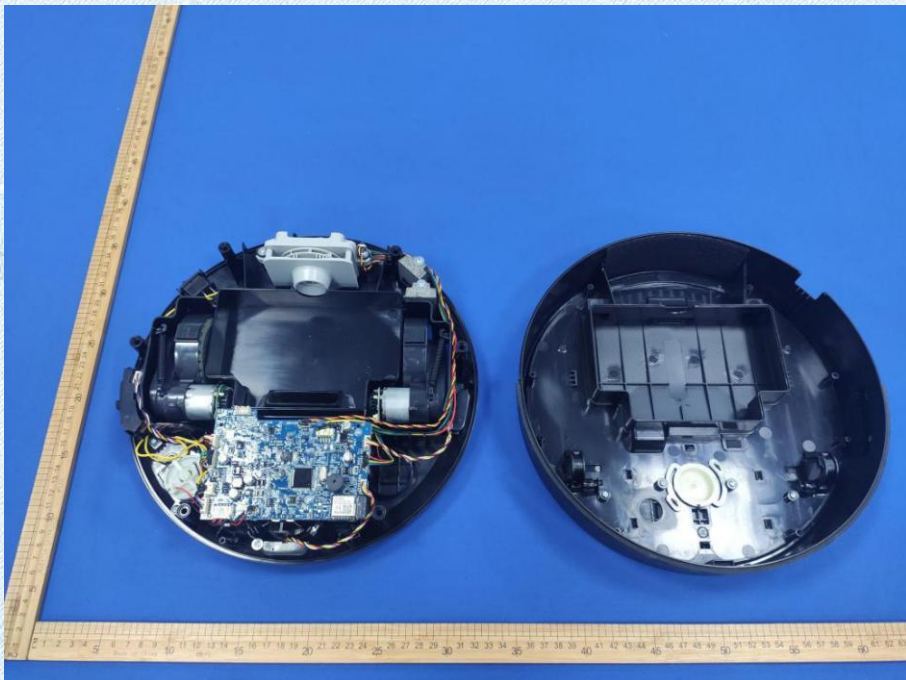
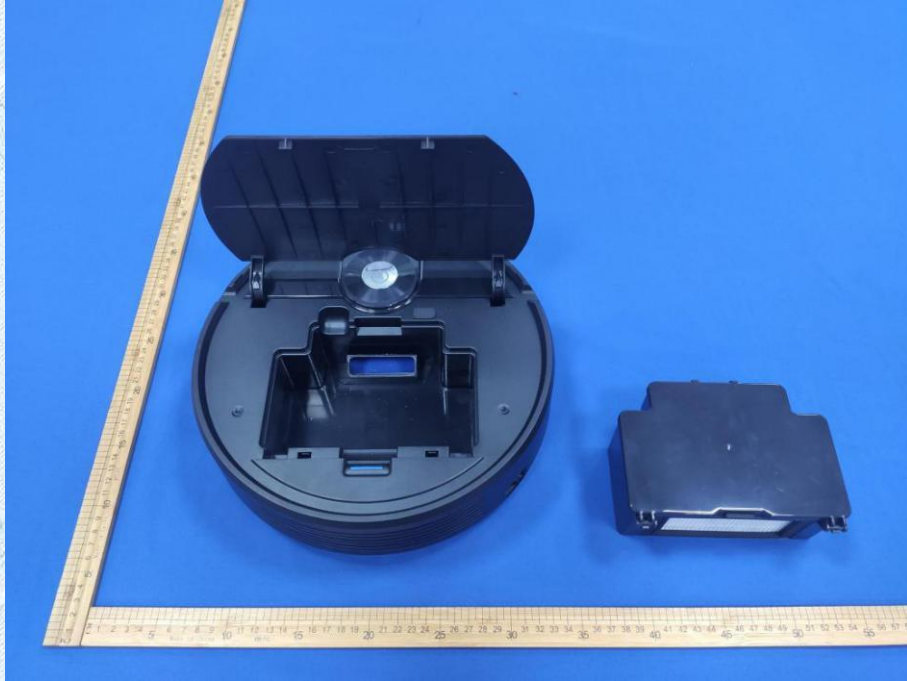


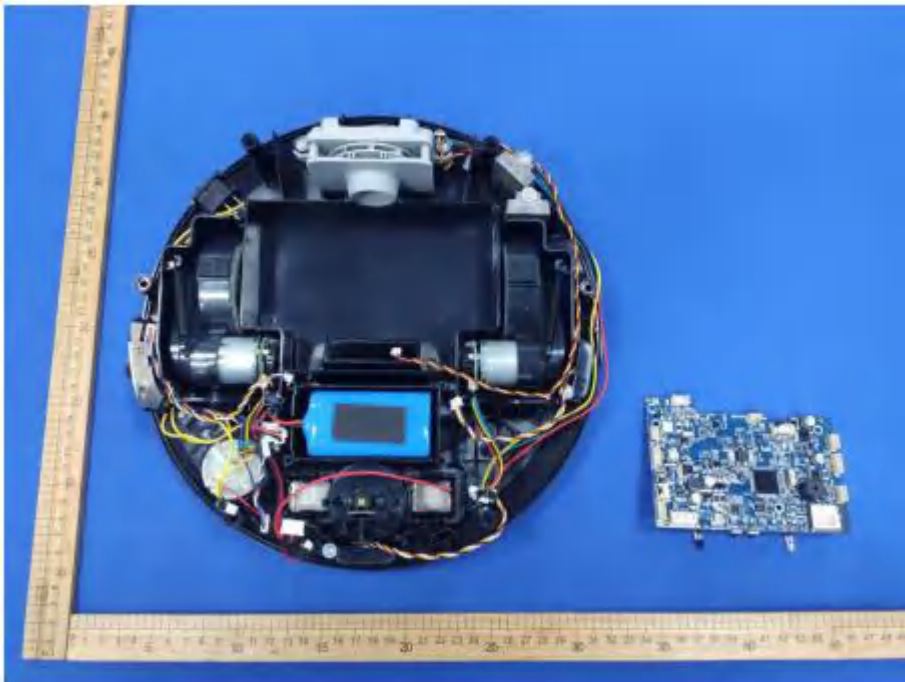
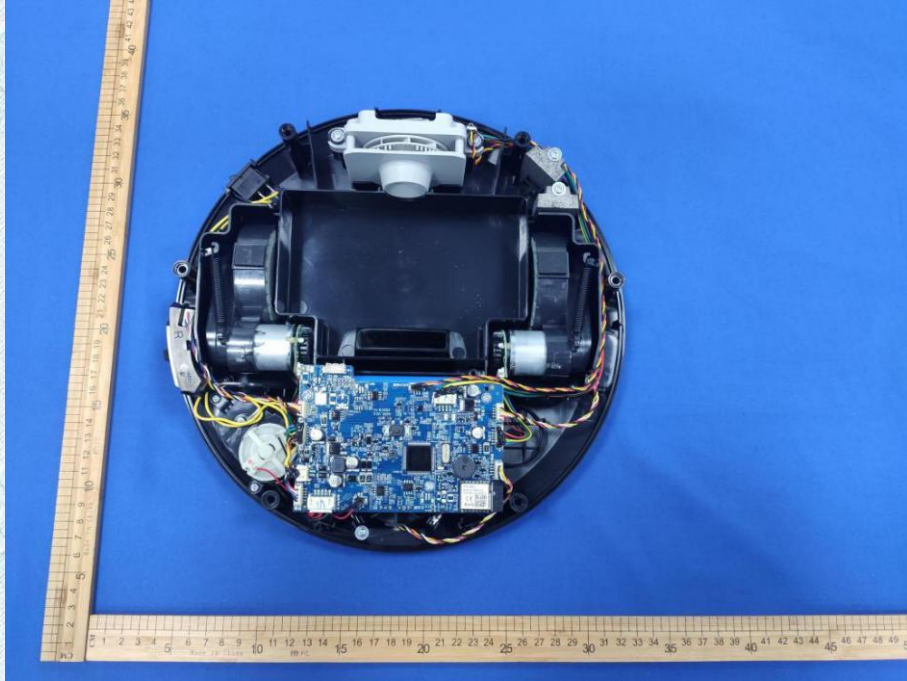


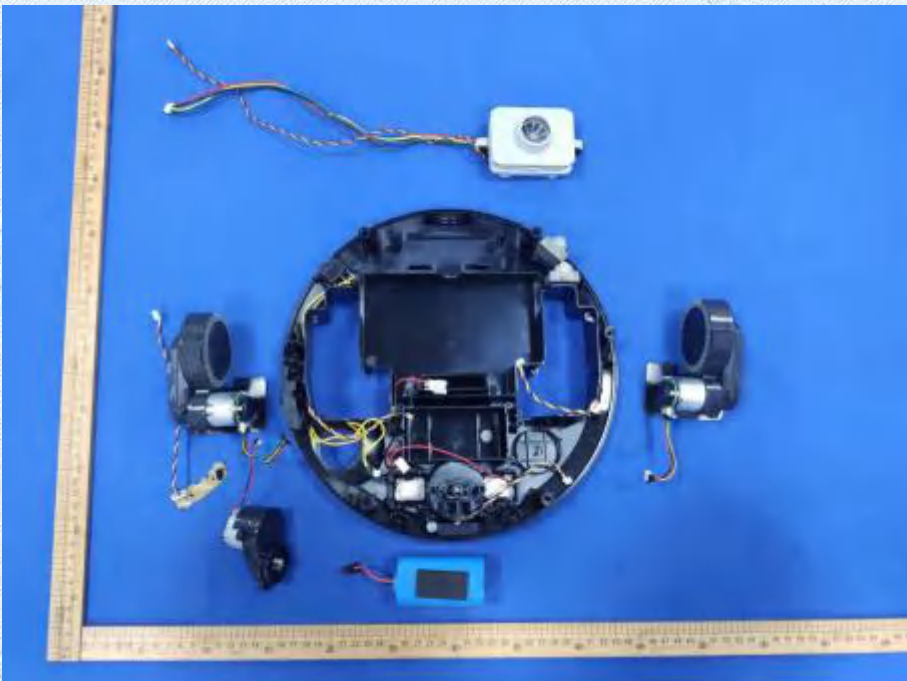
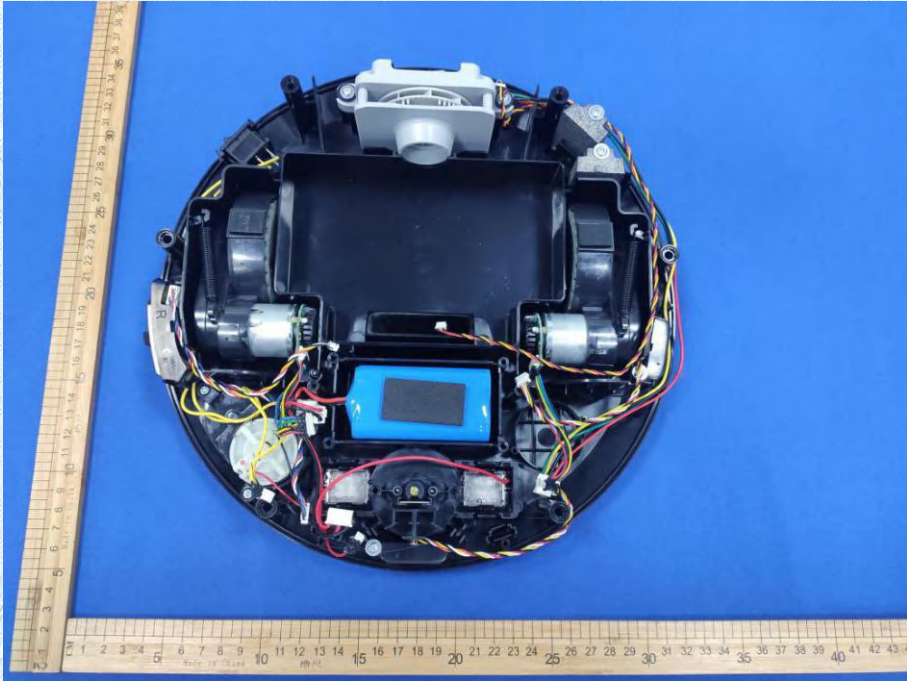


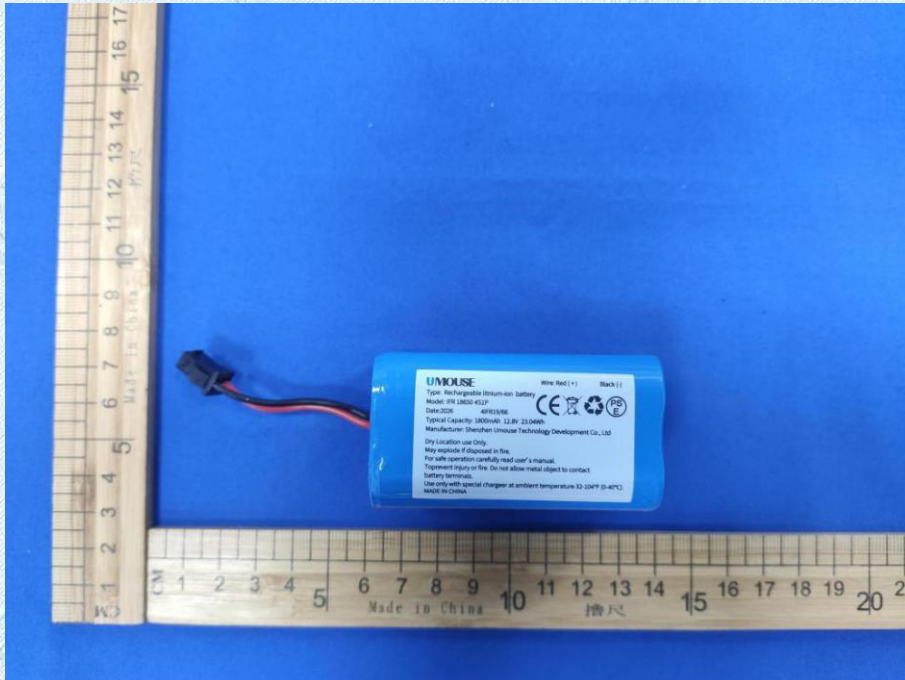


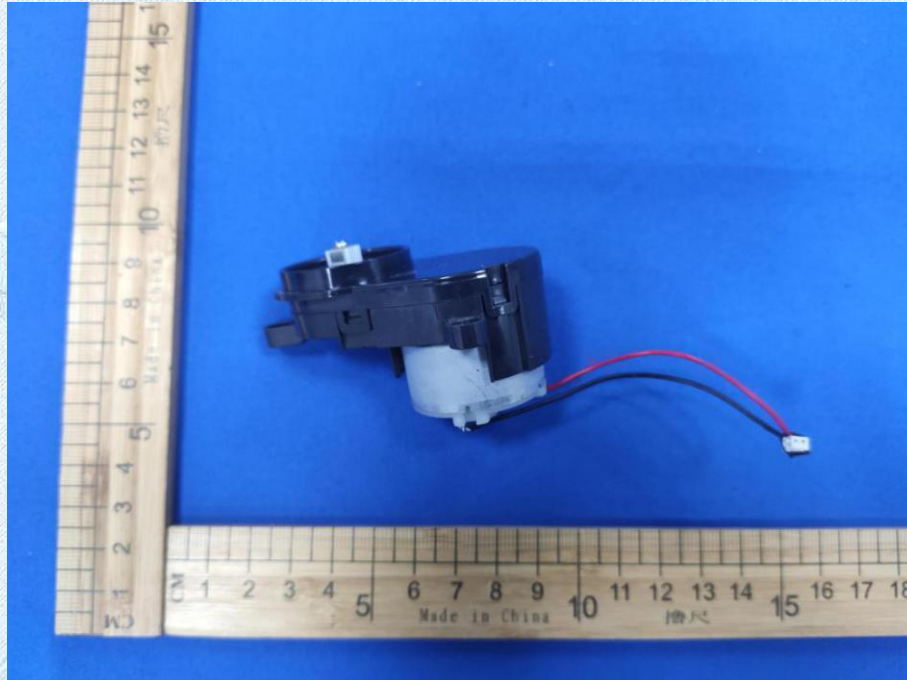
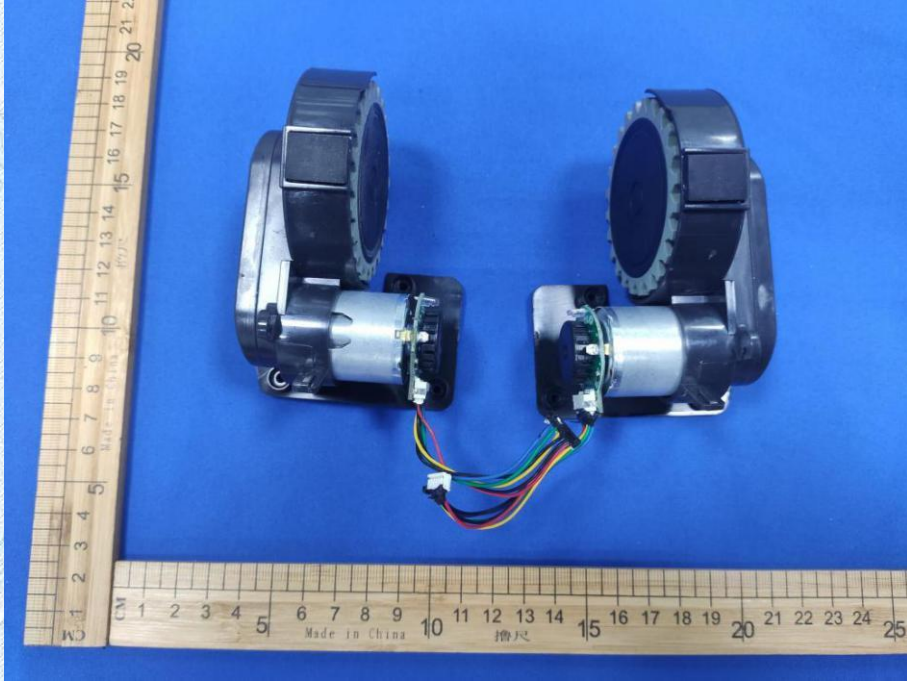
Internal Photographs



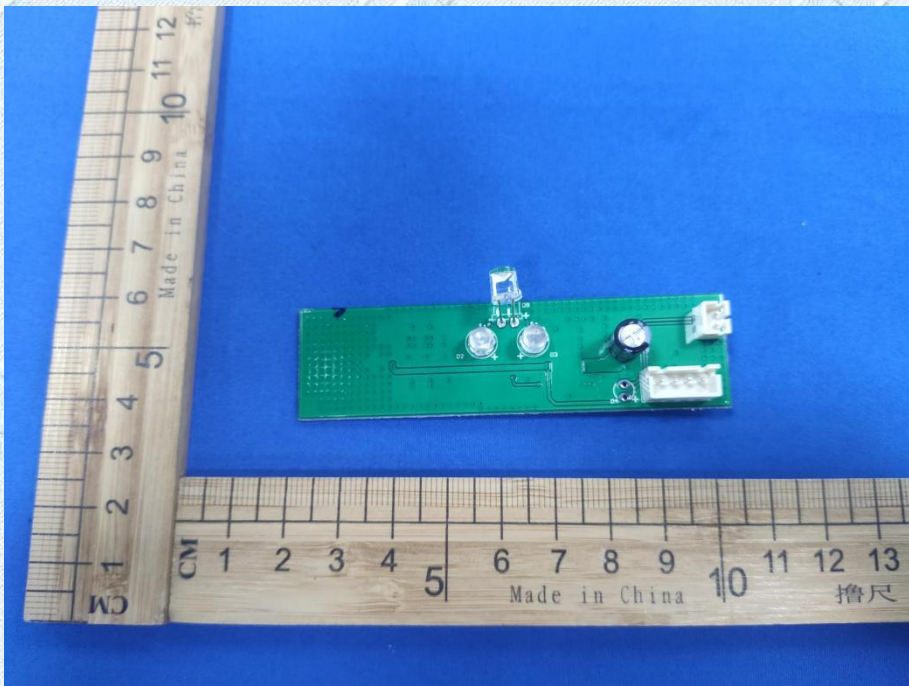
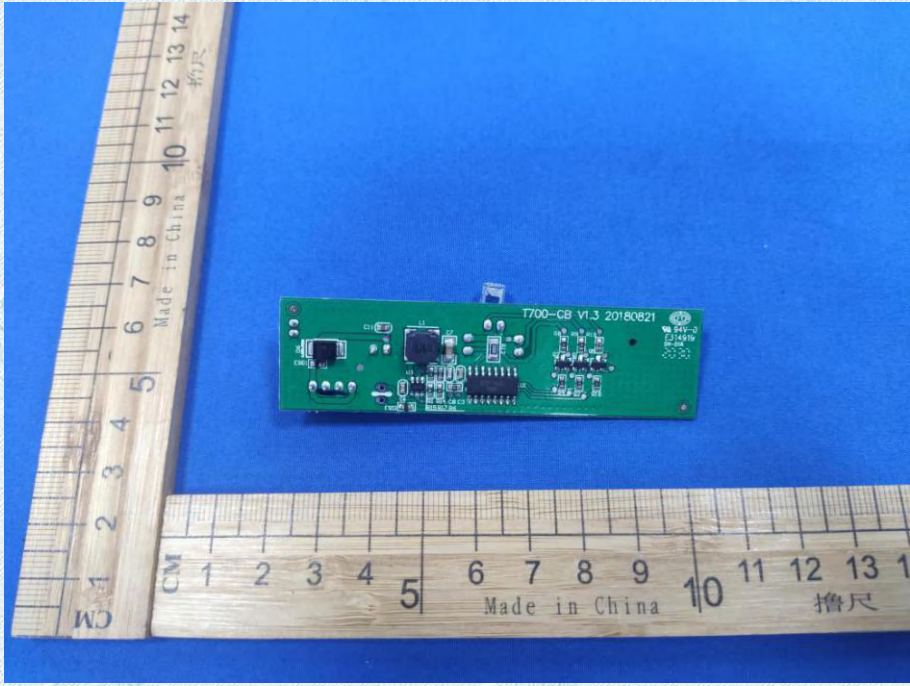


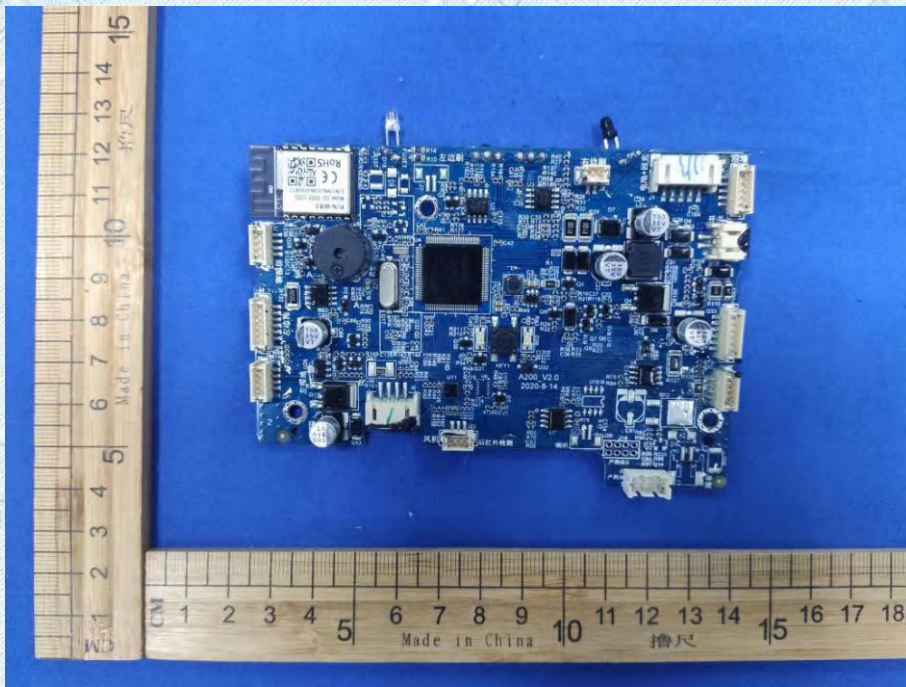
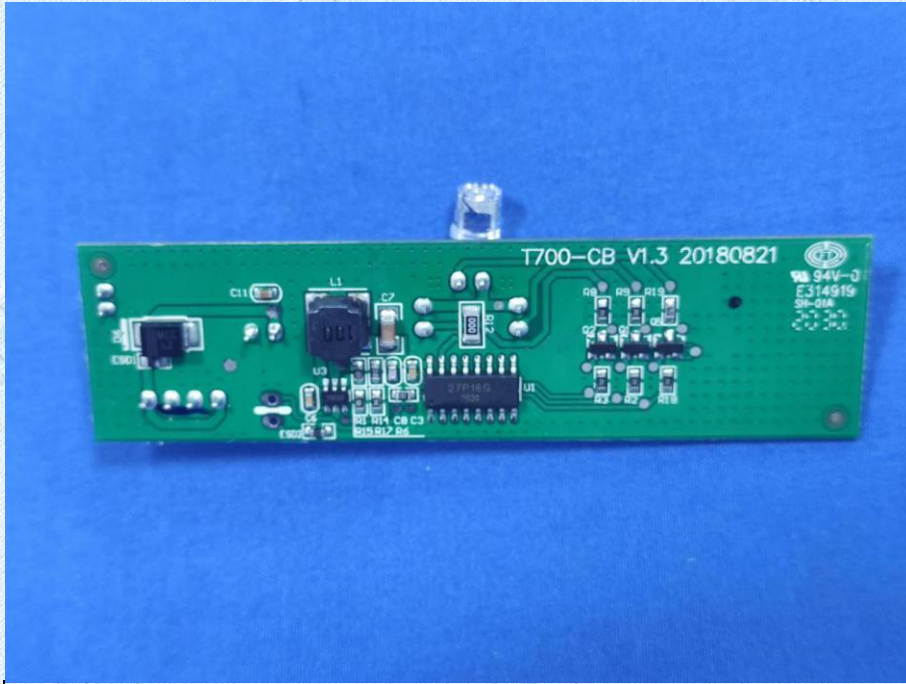


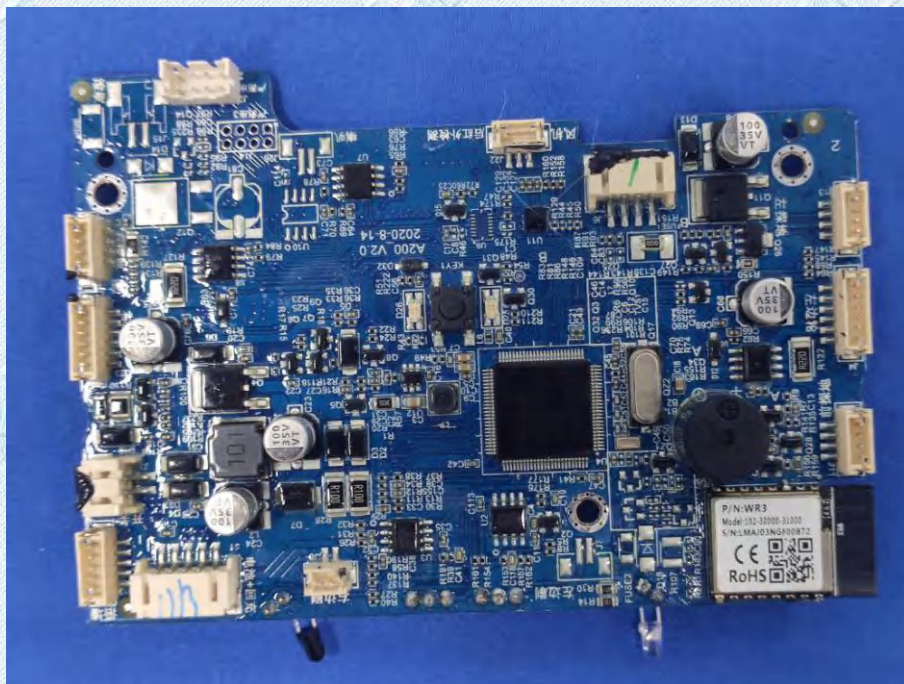
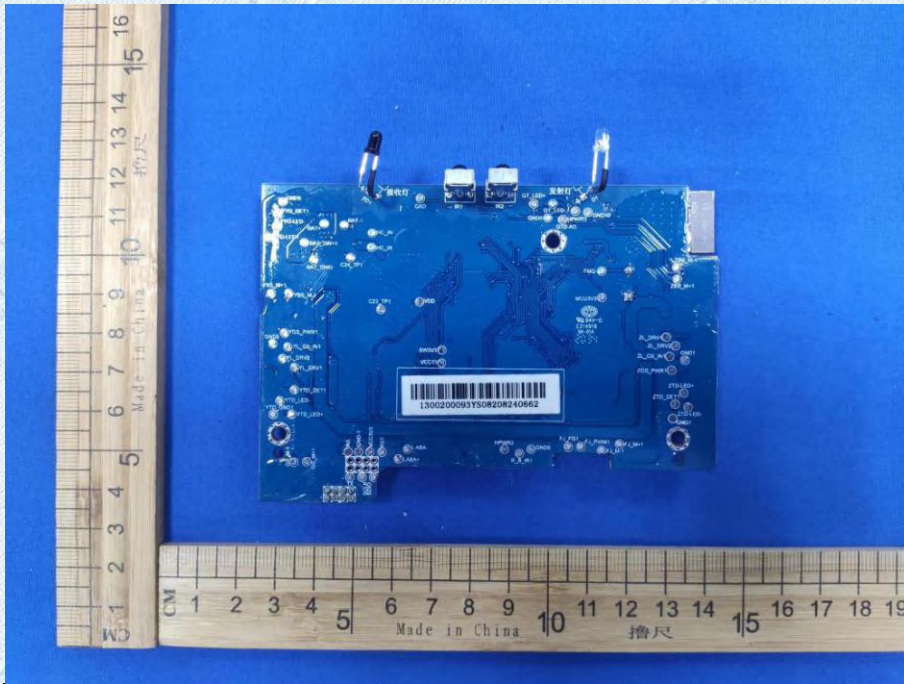


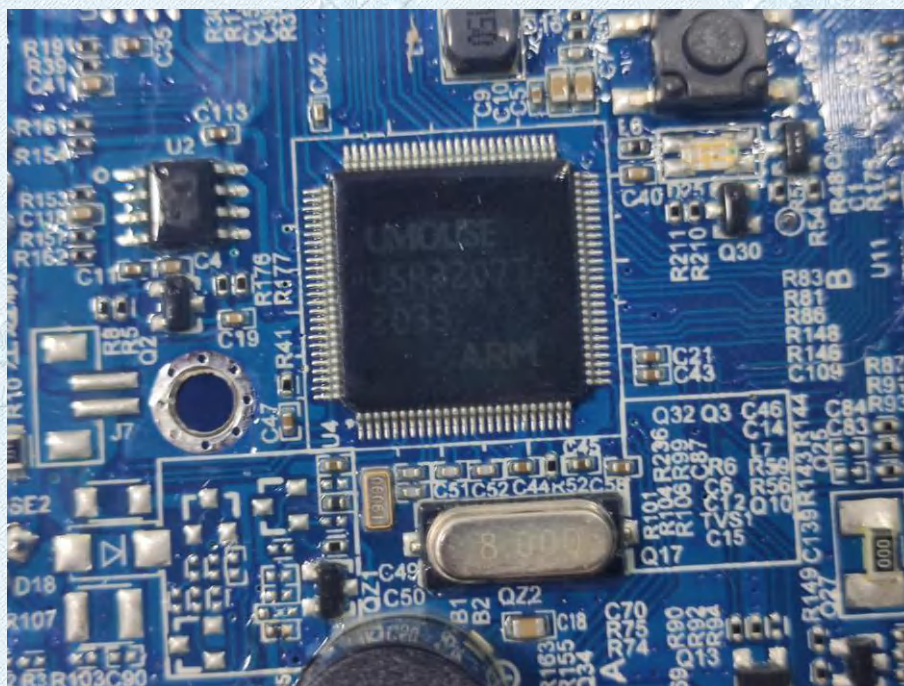
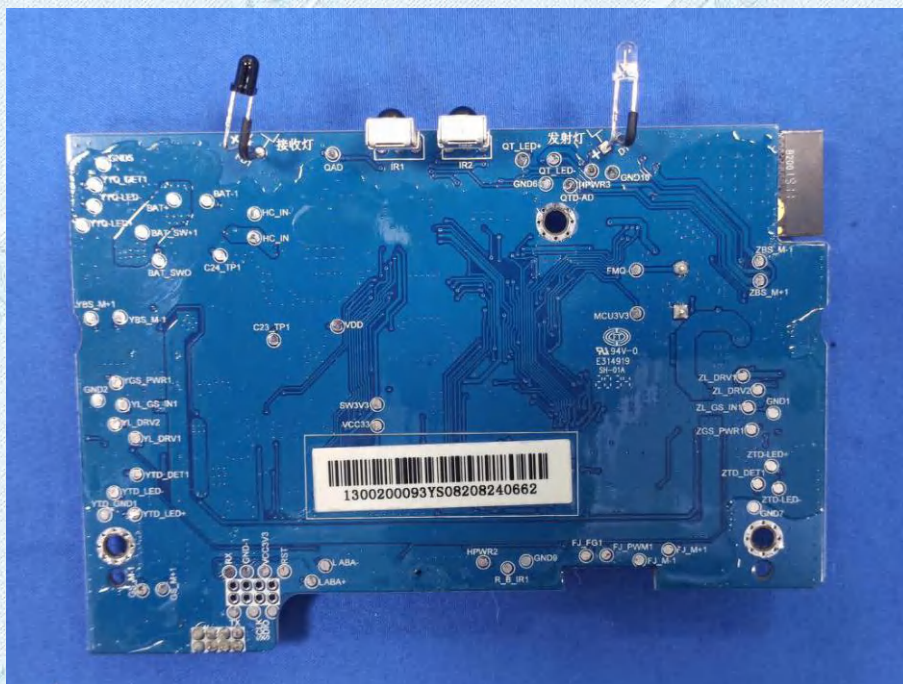


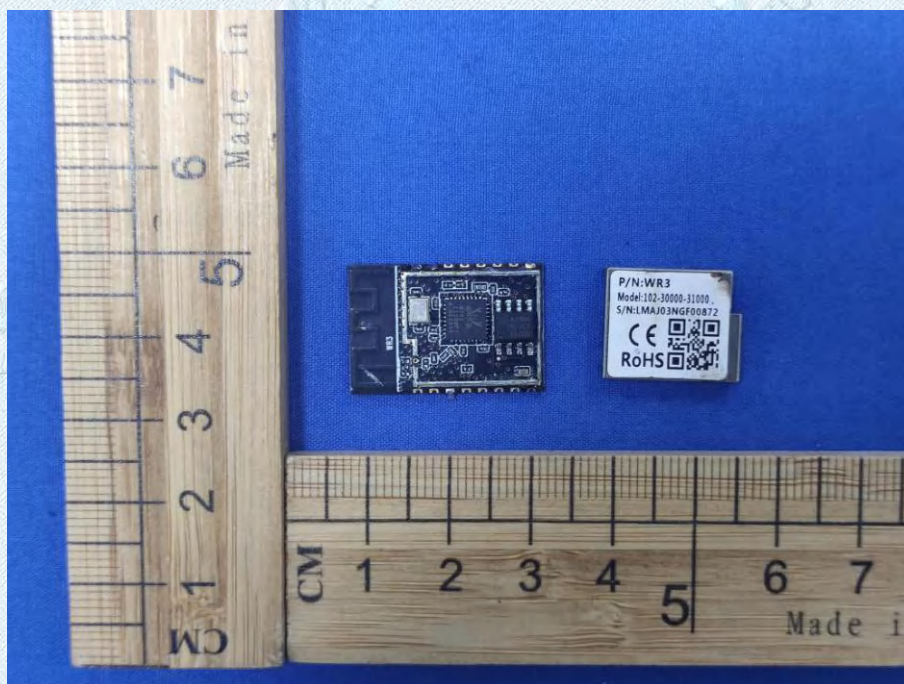


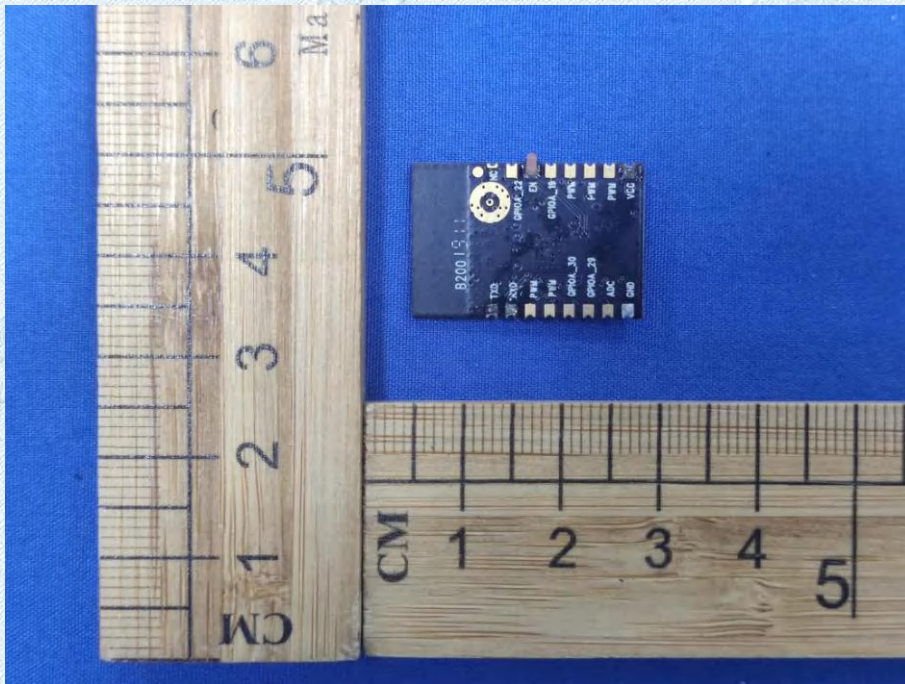
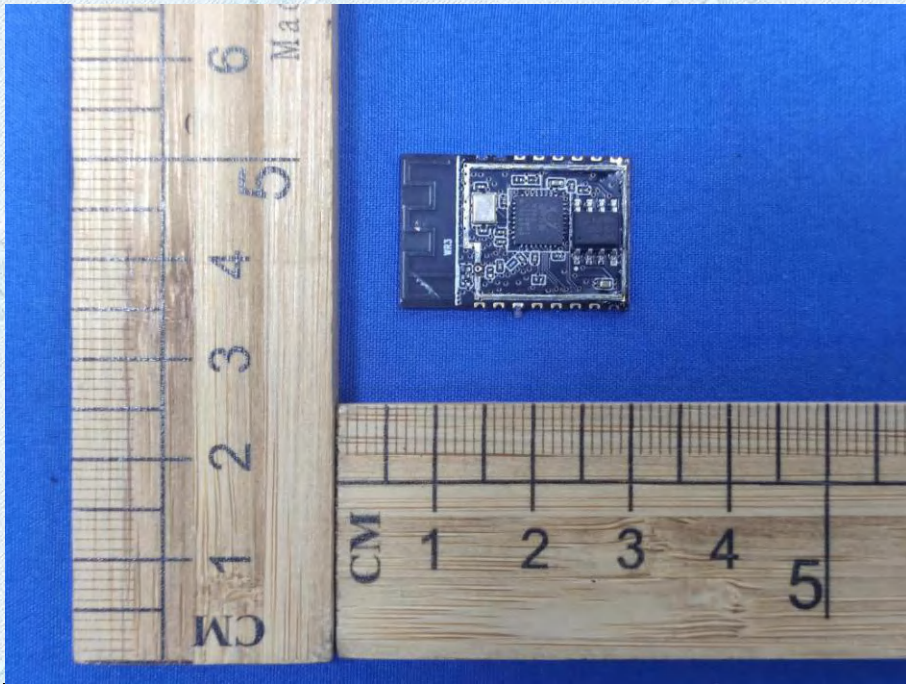


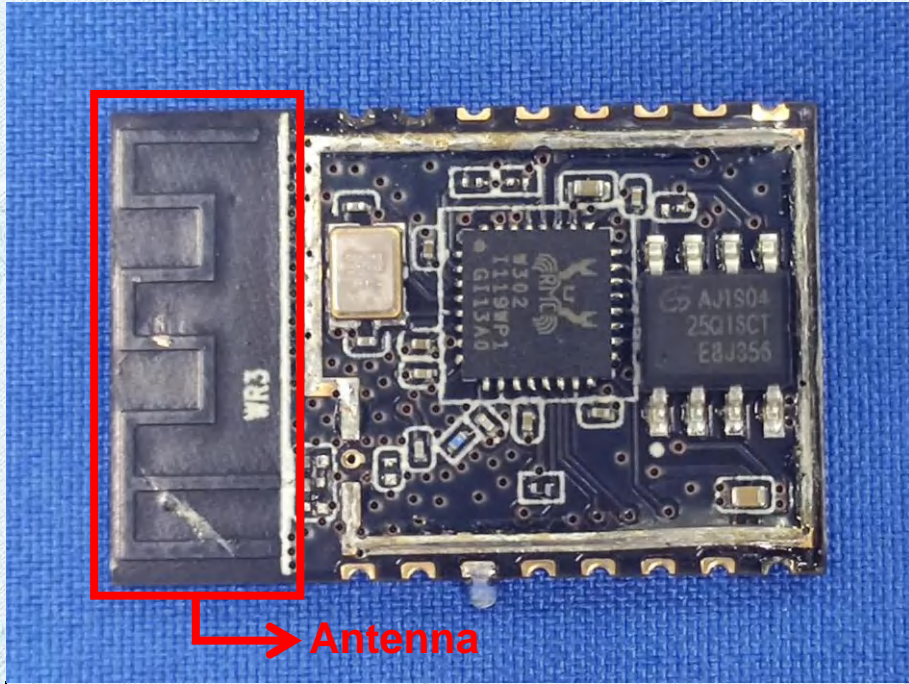












*****THE END*****