Appendix I) Antenna Requirement

15.203 requirement:

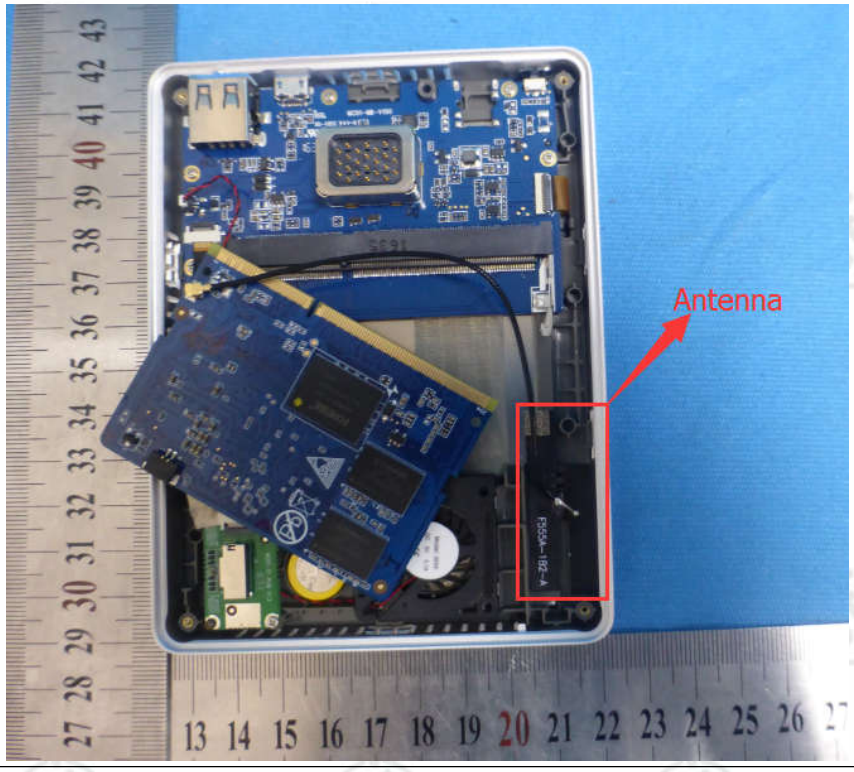
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:	

The antenna is integrated on the inner shell and no consideration of replacement. The best case gain of the antenna is -4.5dBi.



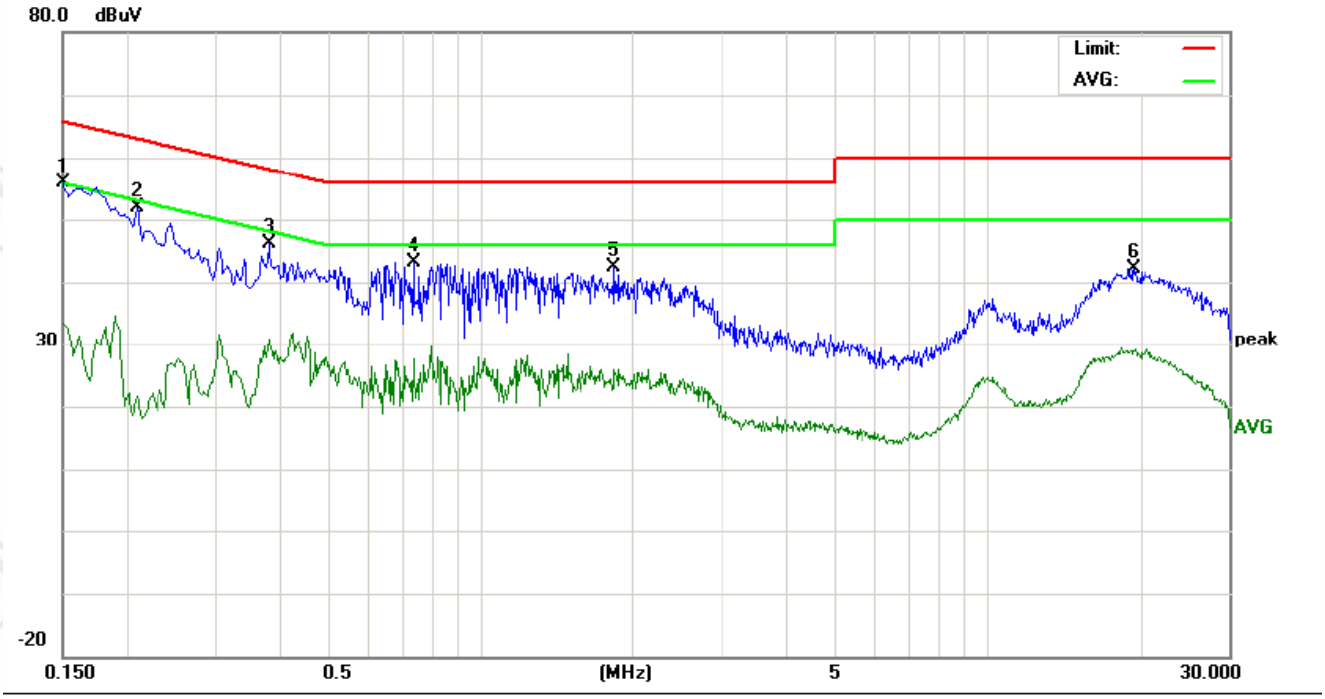
Appendix J) AC Power Line Conducted Emission

<table>
<tr><td>Test Procedure:</td><td>Test frequency range :150KHz-30MHz
1)The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr>
<tr><th>Quasi-peak</th><th>Average</th></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.
NOTE : The lower limit is applicable at the transition frequency</td></tr>
</table>

Measurement Data

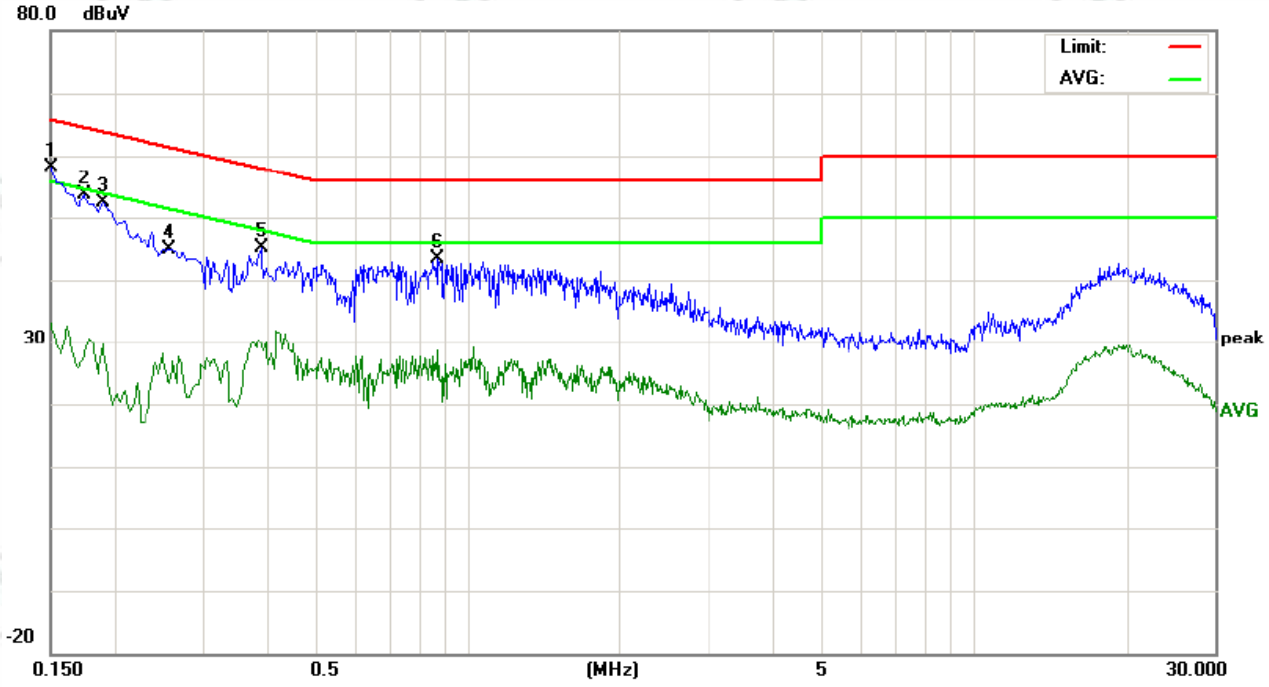
An initial pre-scan was performed on the live and neutral lines with peak detector.
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1500	45.99	40.72	23.04	9.77	55.76	50.49	32.81	65.99	55.99	-15.50	-23.18	P	
2	0.2100	42.21	33.83	11.76	9.72	51.93	43.55	21.48	63.20	53.20	-19.65	-31.72	P	
3	0.3820	36.30	30.87	19.93	9.76	46.06	40.63	29.69	58.23	48.23	-17.60	-18.54	P	
4	0.7380	33.47	27.94	14.56	9.75	43.22	37.69	24.31	56.00	46.00	-18.31	-21.69	P	
5	1.8420	32.65	25.19	13.80	9.70	42.35	34.89	23.50	56.00	46.00	-21.11	-22.50	P	
6	19.4700	31.87	26.26	18.47	10.14	42.01	36.40	28.61	60.00	50.00	-23.60	-21.39	P	

Neutral line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1500	48.43	41.52	23.54	9.77	58.20	51.29	33.31	65.99	55.99	-14.70	-22.68	P	
2	0.1740	43.77	38.03	16.95	9.74	53.51	47.77	26.69	64.76	54.76	-16.99	-28.07	P	
3	0.1900	42.64	38.33	19.50	9.72	52.36	48.05	29.22	64.03	54.03	-15.98	-24.81	P	
4	0.2580	35.18	30.79	15.43	9.75	44.93	40.54	25.18	61.49	51.49	-20.95	-26.31	P	
5	0.3899	35.36	30.30	18.85	9.75	45.11	40.05	28.60	58.06	48.06	-18.01	-19.46	P	
6	0.8780	33.54	29.24	14.71	9.75	43.29	38.99	24.46	56.00	46.00	-17.01	-21.54	P	

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

Appendix K) Restricted bands around fundamental frequency (Radiated)

Receiver Setup:

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:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. 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.
d. 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 table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. 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

Above 1GHz test procedure as below:

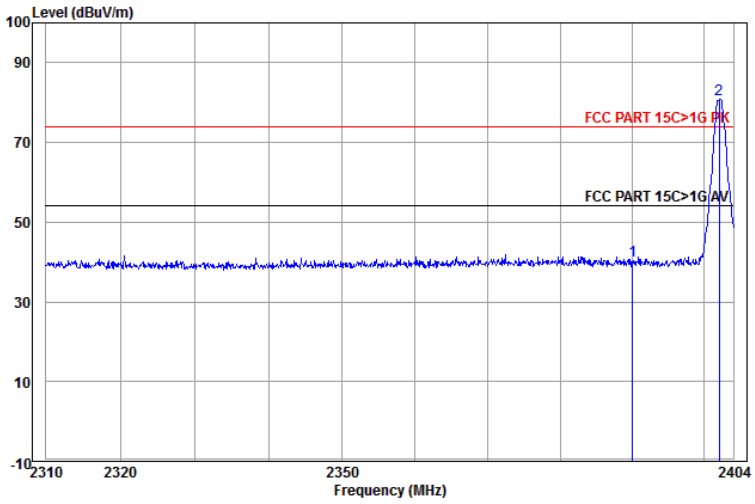
g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. b. Test the EUT in the lowest channel , the Highest channel
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

Frequency	Limit (dBμV/m @3m)	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

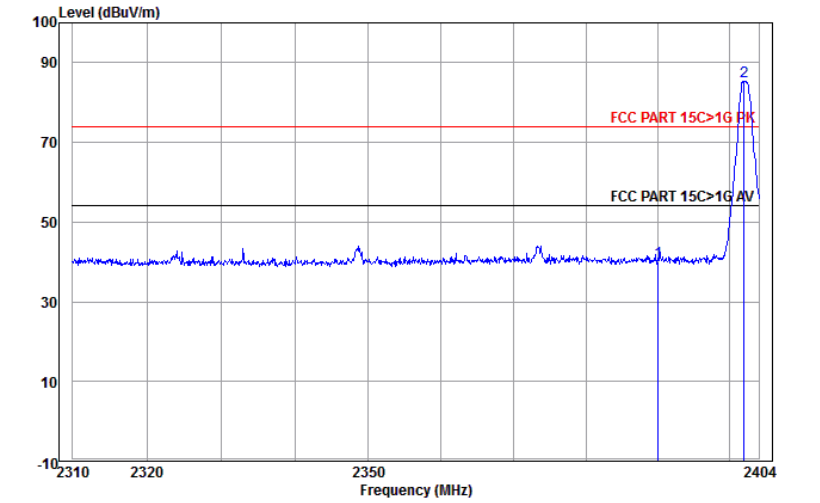
Test plot as follows:

Worse case mode:	GFSK(1-DH5)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



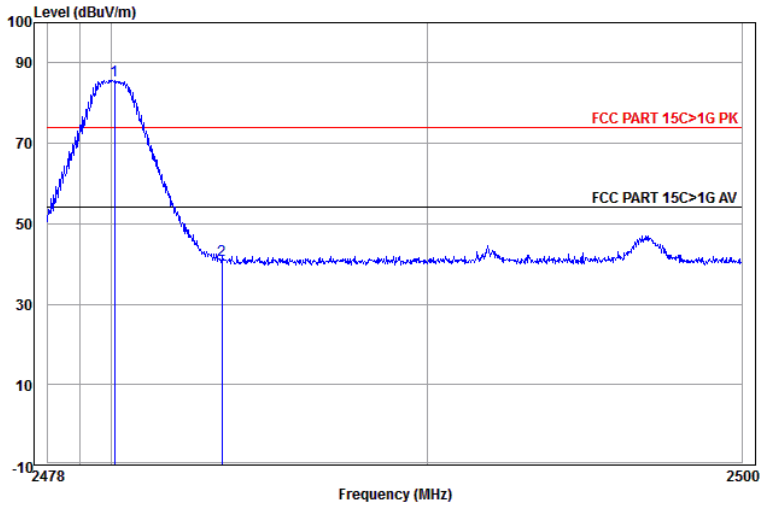
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	44.03	47.68	40.46	74.00	-33.54	Horizontal	
2 pp	2402.083	32.56	4.31	44.04	87.91	80.74	74.00	6.74	Horizontal	

Worse case mode:	GFSK(1-DH5)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



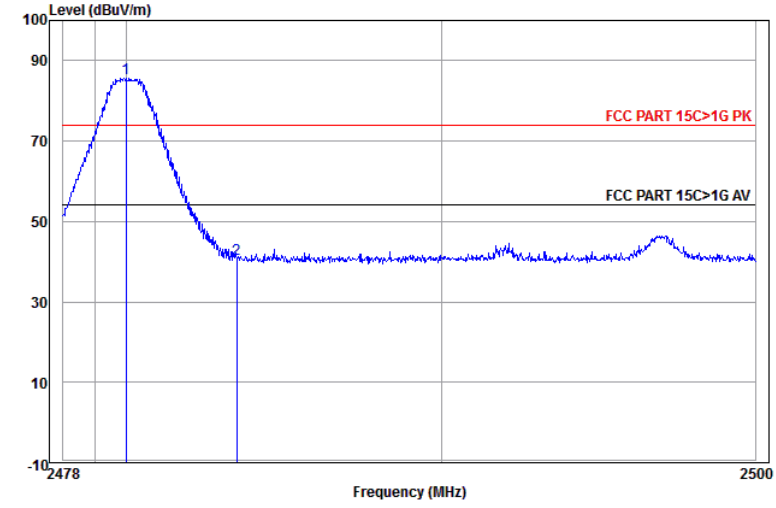
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	44.03	47.28	40.06	74.00	-33.94	Vertical	
2 pp	2401.987	32.56	4.31	44.04	92.58	85.41	74.00	11.41	Vertical	

Worse case mode:	GFSK(1-DH5)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



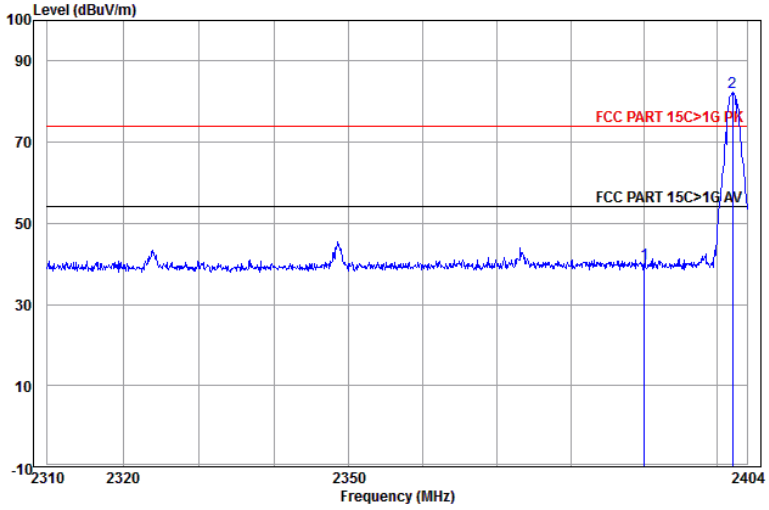
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2480.104	32.71	4.50	44.14	92.52	85.59	74.00	11.59	Horizontal	
2	2483.500	32.71	4.51	44.14	47.95	41.03	74.00	-32.97	Horizontal	

Worse case mode:	GFSK(1-DH5)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



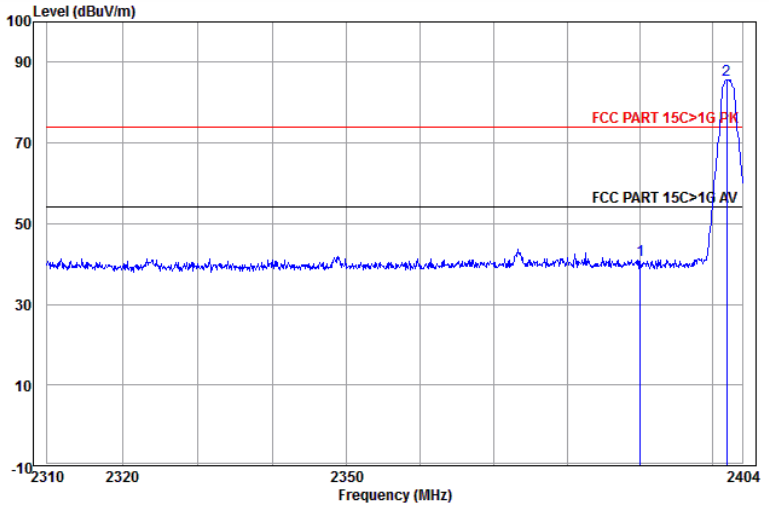
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2479.994	32.71	4.50	44.14	92.54	85.61	74.00	11.61	Vertical	
2	2483.500	32.71	4.51	44.14	47.65	40.73	74.00	-33.27	Vertical	

Worse case mode:	π/4DQPSK(2-DH5)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



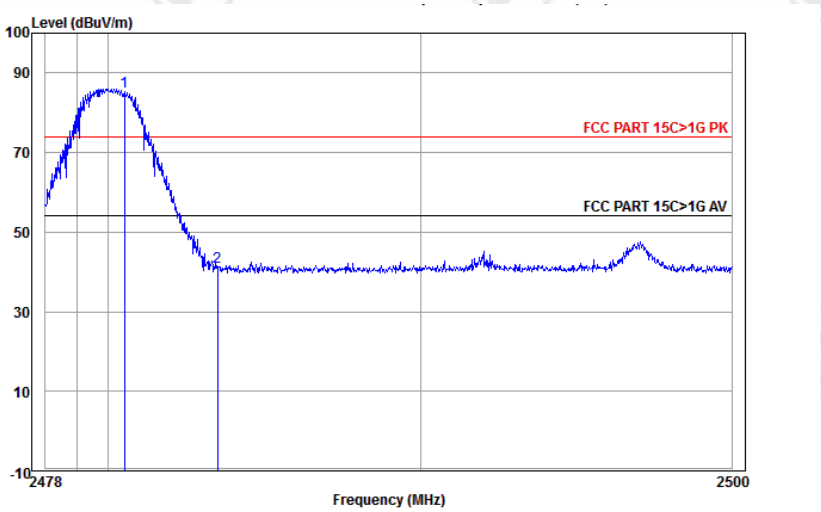
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	44.03	47.21	39.99	74.00	-34.01	Horizontal	
2 pp	2402.083	32.56	4.31	44.04	89.48	82.31	74.00	8.31	Horizontal	

Worse case mode:	π/4DQPSK(2-DH5)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



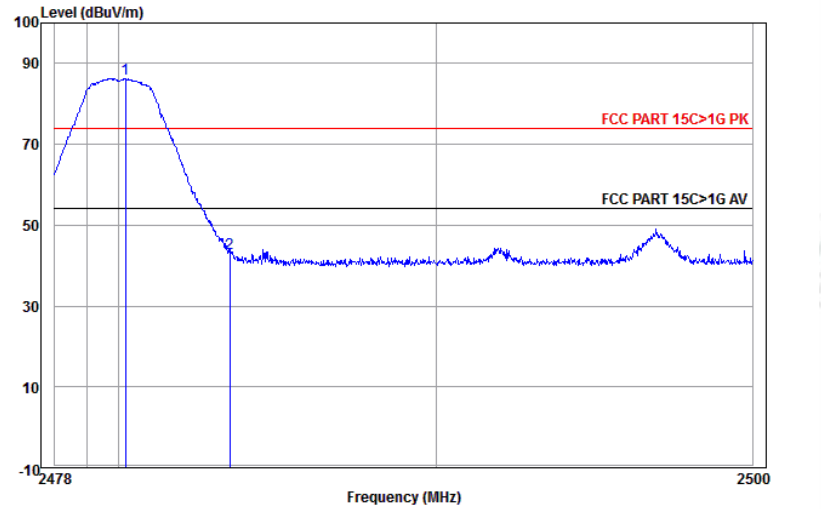
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	44.03	48.31	41.09	74.00	-32.91	Vertical	
2 pp	2401.891	32.56	4.31	44.04	92.90	85.73	74.00	11.73	Vertical	

Worse case mode:	π/4DQPSK(2-DH5)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



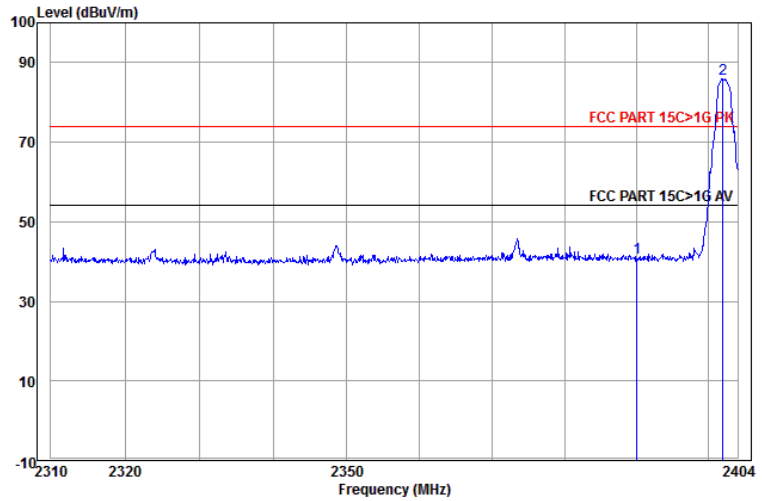
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2480.520	32.71	4.50	44.14	92.29	85.36	74.00	11.36	Horizontal	
2	2483.500	32.71	4.51	44.14	48.30	41.38	74.00	-32.62	Horizontal	

Worse case mode:	π/4DQPSK(2-DH5)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



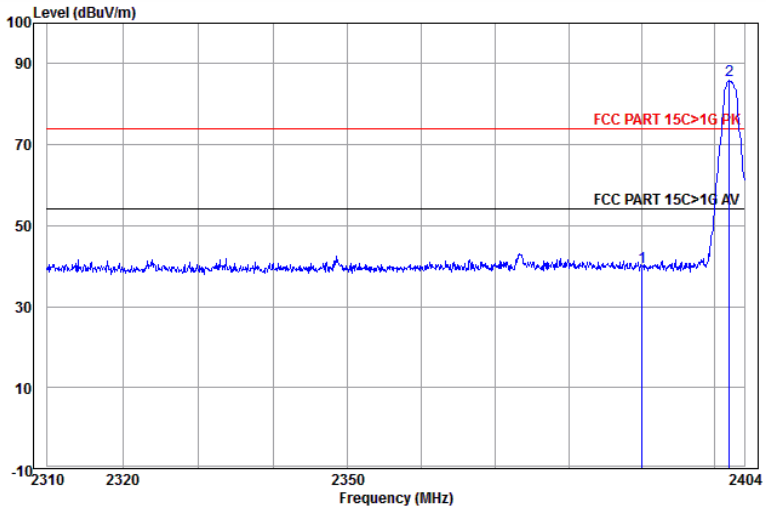
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2480.213	32.71	4.50	44.14	93.21	86.28	74.00	12.28	Vertical	
2	2483.500	32.71	4.51	44.14	50.01	43.09	74.00	-30.91	Vertical	

Worse case mode:	8DPSK(3-DH5)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



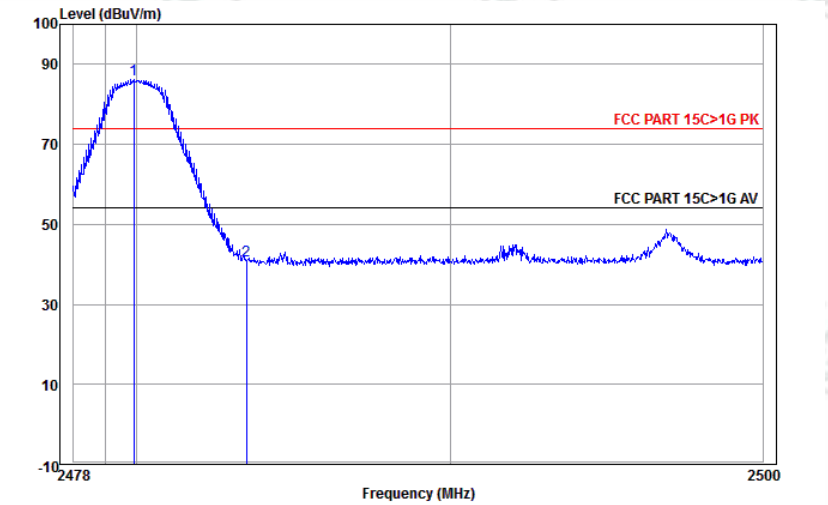
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	44.03	48.17	40.95	74.00	-33.05	Horizontal	
2 pp	2401.987	32.56	4.31	44.04	93.04	85.87	74.00	11.87	Horizontal	

Worse case mode:	8DPSK(3-DH5)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



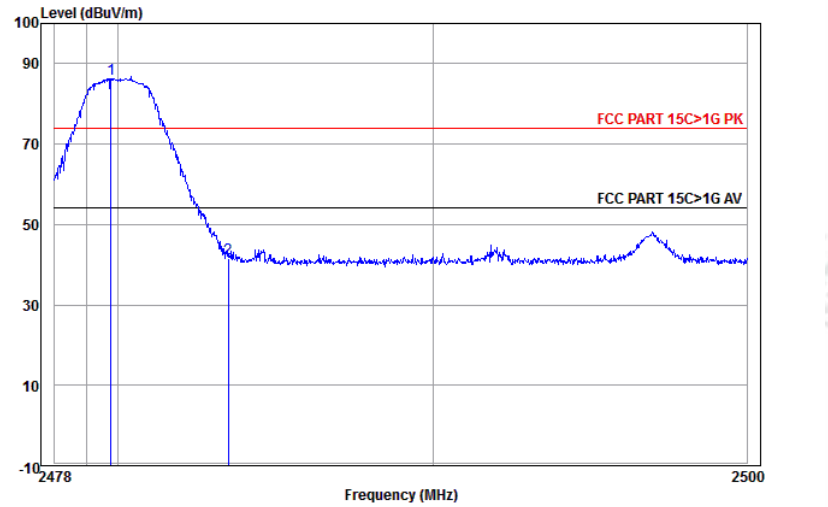
	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	44.03	46.87	39.65	74.00	-34.35	Vertical	
2 pp	2401.987	32.56	4.31	44.04	93.03	85.86	74.00	11.86	Vertical	

Worse case mode:	8DPSK(3-DH5)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2479.906	32.71	4.50	44.14	93.13	86.20	74.00	12.20	Horizontal	
2	2483.500	32.71	4.51	44.14	47.80	40.88	74.00	-33.12	Horizontal	

Worse case mode:	8DPSK(3-DH5)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



	Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2479.775	32.71	4.50	44.14	93.24	86.31	74.00	12.31	Vertical	
2	2483.500	32.71	4.51	44.14	48.50	41.58	74.00	-32.42	Vertical	

Note:

1) Through Pre-scan transmitting mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of π/4DQPSK modulation type, the 3-DH5 of data type is the worse case of 8DPSK modulation type in charge + transmitter mode.

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 =Receiver Reading -Correct Factor
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix L) 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

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, whichwas mounted on the top of a variable-height antenna tower.
c. 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.
d. 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. 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.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
i. 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.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

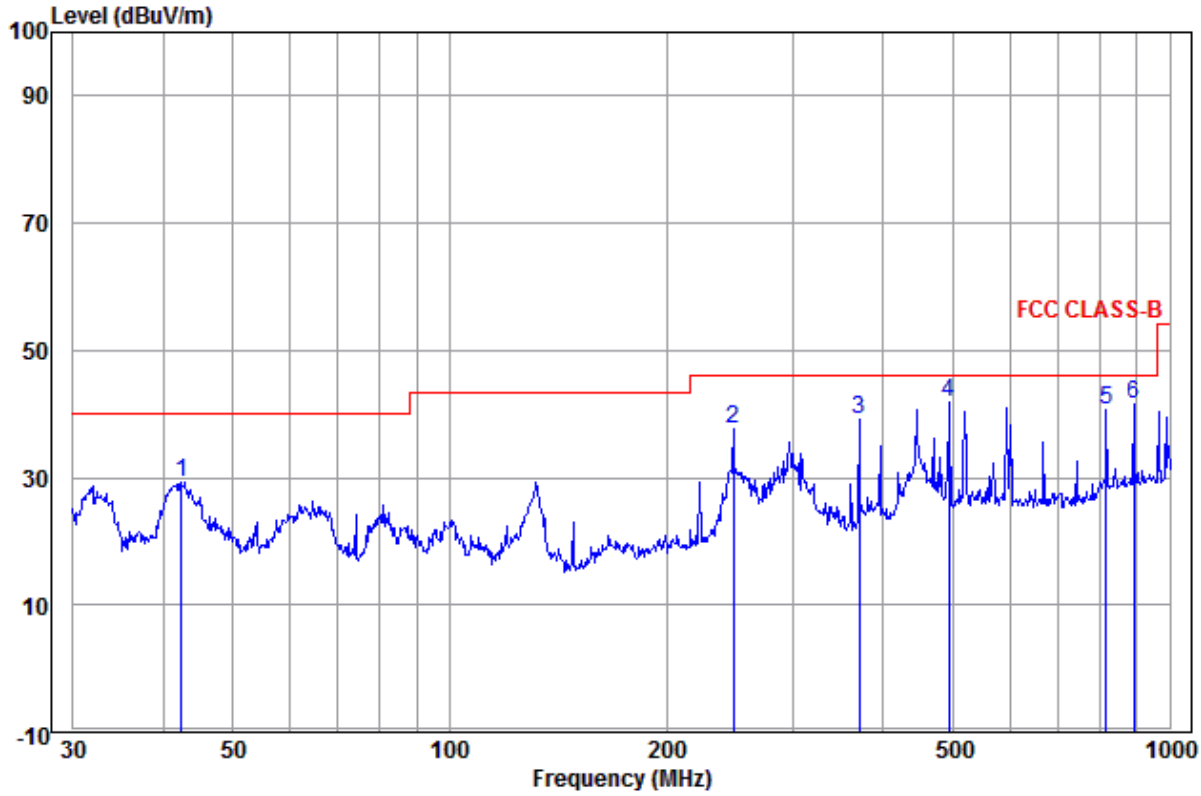
Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	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.

Radiated Spurious Emissions test Data:

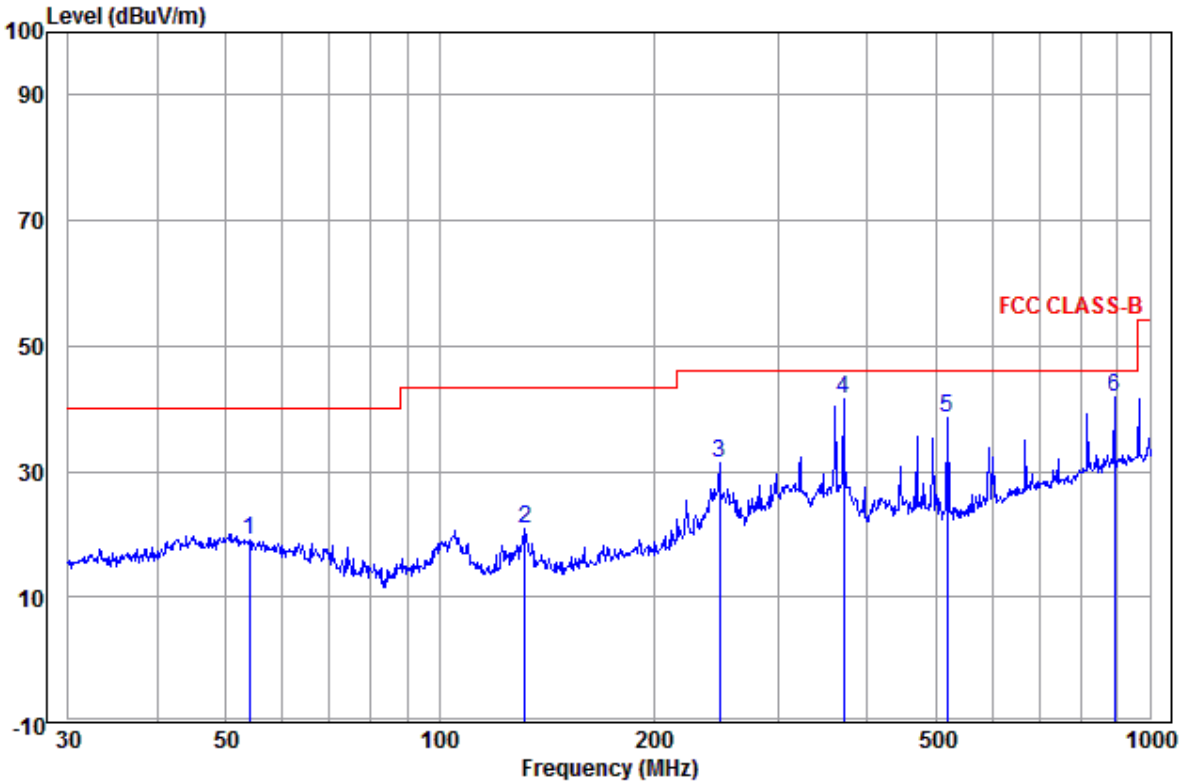
Radiated Emission below 1GHz

30MHz~1GHz (QP)		
Test mode:	Transmitting	Vertical



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	42.451	12.64	0.07	16.51	29.22	40.00	-10.78	Vertical	
2	247.682	11.96	1.33	24.49	37.78	46.00	-8.22	Vertical	
3	370.702	14.93	1.32	22.84	39.09	46.00	-6.91	Vertical	
4 pp	494.199	17.10	1.51	23.11	41.72	46.00	-4.28	Vertical	
5	815.968	20.97	2.46	17.08	40.51	46.00	-5.49	Vertical	
6	890.728	21.84	2.48	17.20	41.52	46.00	-4.48	Vertical	

Test mode:	Transmitting	Horizontal



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	53.882	12.52	0.15	6.32	18.99	40.00	-21.01	Horizontal	
2	131.758	8.86	0.60	11.56	21.02	43.50	-22.48	Horizontal	
3	247.682	11.96	1.33	18.05	31.34	46.00	-14.66	Horizontal	
4	370.702	14.93	1.32	25.20	41.45	46.00	-4.55	Horizontal	
5	519.065	17.51	1.53	19.53	38.57	46.00	-7.43	Horizontal	
6 pp	890.728	21.84	2.48	17.55	41.87	46.00	-4.13	Horizontal	

Transmitter Emission above 1GHz

Worse case mode:		GFSK(1-DH5)		Test channel:		Lowest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1502.732	30.88	2.83	43.99	47.30	37.02	74.00	-36.98	Pass	H
1899.278	31.55	3.16	43.59	47.73	38.85	74.00	-35.15	Pass	H
4804.000	34.69	5.11	44.60	44.03	39.23	74.00	-34.77	Pass	H
5895.771	35.82	7.20	44.51	46.81	45.32	74.00	-28.68	Pass	H
7206.000	36.42	6.66	44.77	44.32	42.63	74.00	-31.37	Pass	H
9608.000	37.88	7.73	45.58	44.49	44.52	74.00	-29.48	Pass	H
1450.122	30.77	2.78	44.06	47.57	37.06	74.00	-36.94	Pass	V
1777.646	31.36	3.07	43.70	55.78	46.51	74.00	-27.49	Pass	V
4804.000	34.69	5.11	44.60	46.17	41.37	74.00	-32.63	Pass	V
5617.407	35.61	6.57	44.54	50.00	47.64	74.00	-26.36	Pass	V
7206.000	36.42	6.66	44.77	46.99	45.30	74.00	-28.70	Pass	V
9608.000	37.88	7.73	45.58	46.06	46.09	74.00	-27.91	Pass	V

Worse case mode:		GFSK(1-DH5)		Test channel:		Middle	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1487.509	30.85	2.82	44.01	47.77	37.43	74.00	-36.57	Pass	H
3719.146	33.00	5.49	44.63	47.49	41.35	74.00	-32.65	Pass	H
4882.000	34.85	5.08	44.60	46.79	42.12	74.00	-31.88	Pass	H
5532.263	35.54	6.37	44.54	48.64	46.01	74.00	-27.99	Pass	H
7323.000	36.43	6.77	44.87	45.66	43.99	74.00	-30.01	Pass	H
9764.000	38.05	7.60	45.55	45.84	45.94	74.00	-28.06	Pass	H
1483.727	30.84	2.81	44.02	56.48	46.11	74.00	-27.89	Pass	V
3757.208	32.97	5.48	44.62	48.20	42.03	74.00	-31.97	Pass	V
4882.000	34.85	5.08	44.60	44.36	39.69	74.00	-34.31	Pass	V
6203.700	36.01	7.22	44.52	45.97	44.68	74.00	-29.32	Pass	V
7323.000	36.43	6.77	44.87	44.85	43.18	74.00	-30.82	Pass	V
9764.000	38.05	7.60	45.55	43.04	43.14	74.00	-30.86	Pass	V

Worse case mode:		GFSK(1-DH5)		Test channel:		Highest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1364.182	30.60	2.69	44.16	47.95	37.08	74.00	-36.92	Pass	H
3893.520	32.88	5.46	44.61	47.35	41.08	74.00	-32.92	Pass	H
4960.000	35.02	5.05	44.60	43.19	38.66	74.00	-35.34	Pass	H
6412.427	36.12	7.02	44.54	46.53	45.13	74.00	-28.87	Pass	H
7440.000	36.45	6.88	44.97	44.12	42.48	74.00	-31.52	Pass	H
9920.000	38.22	7.47	45.52	44.25	44.42	74.00	-29.58	Pass	H
1417.277	30.71	2.75	44.10	48.05	37.41	74.00	-36.59	Pass	V
4223.950	33.36	5.34	44.60	45.95	40.05	74.00	-33.95	Pass	V
4960.000	35.02	5.05	44.60	42.99	38.46	74.00	-35.54	Pass	V
5880.782	35.81	7.17	44.51	46.51	44.98	74.00	-29.02	Pass	V
7440.000	36.45	6.88	44.97	44.88	43.24	74.00	-30.76	Pass	V
9920.000	38.22	7.47	45.52	44.42	44.59	74.00	-29.41	Pass	V

Worse case mode:		π/4DQPSK(2-DH5)		Test channel:		Lowest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1483.727	30.84	2.81	44.02	57.88	47.51	74.00	-26.49	Pass	H
1928.509	31.59	3.18	43.56	55.66	46.87	74.00	-27.13	Pass	H
4804.000	34.69	5.11	44.60	47.57	42.77	74.00	-31.23	Pass	H
6001.768	35.90	7.43	44.50	45.92	44.75	74.00	-29.25	Pass	H
7206.000	36.42	6.66	44.77	43.87	42.18	74.00	-31.82	Pass	H
9608.000	37.88	7.73	45.58	44.30	44.33	74.00	-29.67	Pass	H
1557.252	30.98	2.88	43.93	54.57	44.50	74.00	-29.50	Pass	V
4804.000	34.69	5.11	44.60	45.70	40.90	74.00	-33.10	Pass	V
5865.832	35.80	7.13	44.51	47.34	45.76	74.00	-28.24	Pass	V
7206.000	36.42	6.66	44.77	47.15	45.46	74.00	-28.54	Pass	V
8419.999	36.80	7.75	45.53	46.88	45.90	74.00	-28.10	Pass	V
9608.000	37.88	7.73	45.58	45.55	45.58	74.00	-28.42	Pass	V

Worse case mode:		π/4DQPSK(2-DH5)		Test channel:		Middle	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1483.727	30.84	2.81	44.02	55.03	44.66	74.00	-29.34	Pass	H
1928.509	31.59	3.18	43.56	53.99	45.20	74.00	-28.80	Pass	H
4882.000	34.85	5.08	44.60	43.85	39.18	74.00	-34.82	Pass	H
5956.109	35.87	7.33	44.50	45.82	44.52	74.00	-29.48	Pass	H
7323.000	36.43	6.77	44.87	44.23	42.56	74.00	-31.44	Pass	H
9764.000	38.05	7.60	45.55	43.60	43.70	74.00	-30.30	Pass	H
1483.727	30.84	2.81	44.02	57.03	46.66	74.00	-27.34	Pass	V
1998.475	31.70	3.23	43.50	54.89	46.32	74.00	-27.68	Pass	V
4882.000	34.85	5.08	44.60	44.36	39.69	74.00	-34.31	Pass	V
5865.832	35.80	7.13	44.51	46.52	44.94	74.00	-29.06	Pass	V
7323.000	36.43	6.77	44.87	46.43	44.76	74.00	-29.24	Pass	V
9764.000	38.05	7.60	45.55	44.72	44.82	74.00	-29.18	Pass	V

Worse case mode:		π/4DQPSK(2-DH5)		Test channel:		Highest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1483.727	30.84	2.81	44.02	54.84	44.47	74.00	-29.53	Pass	H
1928.509	31.59	3.18	43.56	52.64	43.85	74.00	-30.15	Pass	H
4960.000	35.02	5.05	44.60	43.66	39.13	74.00	-34.87	Pass	H
5776.922	35.73	6.93	44.52	46.98	45.12	74.00	-28.88	Pass	H
7440.000	36.45	6.88	44.97	44.03	42.39	74.00	-31.61	Pass	H
9920.000	38.22	7.47	45.52	44.04	44.21	74.00	-29.79	Pass	H
1381.656	30.63	2.71	44.14	55.99	45.19	74.00	-28.81	Pass	V
1777.646	31.36	3.07	43.70	54.44	45.17	74.00	-28.83	Pass	V
4149.351	33.18	5.37	44.60	46.53	40.48	74.00	-33.52	Pass	V
4960.000	35.02	5.05	44.60	46.17	41.64	74.00	-32.36	Pass	V
7440.000	36.45	6.88	44.97	44.38	42.74	74.00	-31.26	Pass	V
9920.000	38.22	7.47	45.52	44.81	44.98	74.00	-29.02	Pass	V

Worse case mode:		8DPSK(3-DH5)		Test channel:		Lowest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1333.284	30.53	2.66	44.20	57.89	46.88	74.00	-27.12	Pass	H
3681.469	33.03	5.49	44.63	47.08	40.97	74.00	-33.03	Pass	H
4804.000	34.69	5.11	44.60	43.44	38.64	74.00	-35.36	Pass	H
5776.922	35.73	6.93	44.52	46.11	44.25	74.00	-29.75	Pass	H
7206.000	36.42	6.66	44.77	44.01	42.32	74.00	-31.68	Pass	H
9608.000	37.88	7.73	45.58	44.98	45.01	74.00	-28.99	Pass	H
1483.727	30.84	2.81	44.02	56.79	46.42	74.00	-27.58	Pass	V
3690.853	33.02	5.49	44.63	48.21	42.09	74.00	-31.91	Pass	V
4804.000	34.69	5.11	44.60	44.31	39.51	74.00	-34.49	Pass	V
5880.782	35.81	7.17	44.51	46.27	44.74	74.00	-29.26	Pass	V
7206.000	36.42	6.66	44.77	44.24	42.55	74.00	-31.45	Pass	V
9608.000	37.88	7.73	45.58	44.98	45.01	74.00	-28.99	Pass	V

Worse case mode:		8DPSK(3-DH5)		Test channel:		Middle	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1483.727	30.84	2.81	44.02	56.06	45.69	74.00	-28.31	Pass	H
1928.509	31.59	3.18	43.56	54.73	45.94	74.00	-28.06	Pass	H
4882.000	34.85	5.08	44.60	43.72	39.05	74.00	-34.95	Pass	H
5971.290	35.88	7.37	44.50	45.80	44.55	74.00	-29.45	Pass	H
7323.000	36.43	6.77	44.87	44.68	43.01	74.00	-30.99	Pass	H
9764.000	38.05	7.60	45.55	43.89	43.99	74.00	-30.01	Pass	H
1483.727	30.84	2.81	44.02	56.93	46.56	74.00	-27.44	Pass	V
1706.700	31.24	3.01	43.77	56.76	47.24	74.00	-26.76	Pass	V
4882.000	34.85	5.08	44.60	43.86	39.19	74.00	-34.81	Pass	V
5865.832	35.80	7.13	44.51	46.45	44.87	74.00	-29.13	Pass	V
7323.000	36.43	6.77	44.87	43.85	42.18	74.00	-31.82	Pass	V
9764.000	38.05	7.60	45.55	42.97	43.07	74.00	-30.93	Pass	V

Worse case mode:		8DPSK(3-DH5)		Test channel:		Highest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1483.727	30.84	2.81	44.02	56.61	46.24	74.00	-27.76	Pass	H
3709.691	33.01	5.49	44.63	48.68	42.55	74.00	-31.45	Pass	H
4960.000	35.02	5.05	44.60	43.84	39.31	74.00	-34.69	Pass	H
6187.929	36.00	7.24	44.52	46.19	44.91	74.00	-29.09	Pass	H
7440.000	36.45	6.88	44.97	43.57	41.93	74.00	-32.07	Pass	H
9920.000	38.22	7.47	45.52	43.61	43.78	74.00	-30.22	Pass	H
1381.656	30.63	2.71	44.14	55.50	44.70	74.00	-29.30	Pass	V
1706.700	31.24	3.01	43.77	55.68	46.16	74.00	-27.84	Pass	V
4960.000	35.02	5.05	44.60	48.27	43.74	74.00	-30.26	Pass	V
6299.178	36.06	7.13	44.53	44.93	43.59	74.00	-30.41	Pass	V
7440.000	36.45	6.88	44.97	42.84	41.20	74.00	-32.80	Pass	V
9920.000	38.22	7.47	45.52	43.11	43.28	74.00	-30.72	Pass	V

Note:

1) Through Pre-scan transmitting mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of π/4DQPSK modulation type, the 3-DH5 of data type is the worse case of 8DPSK modulation type in charge + transmitter mode.

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

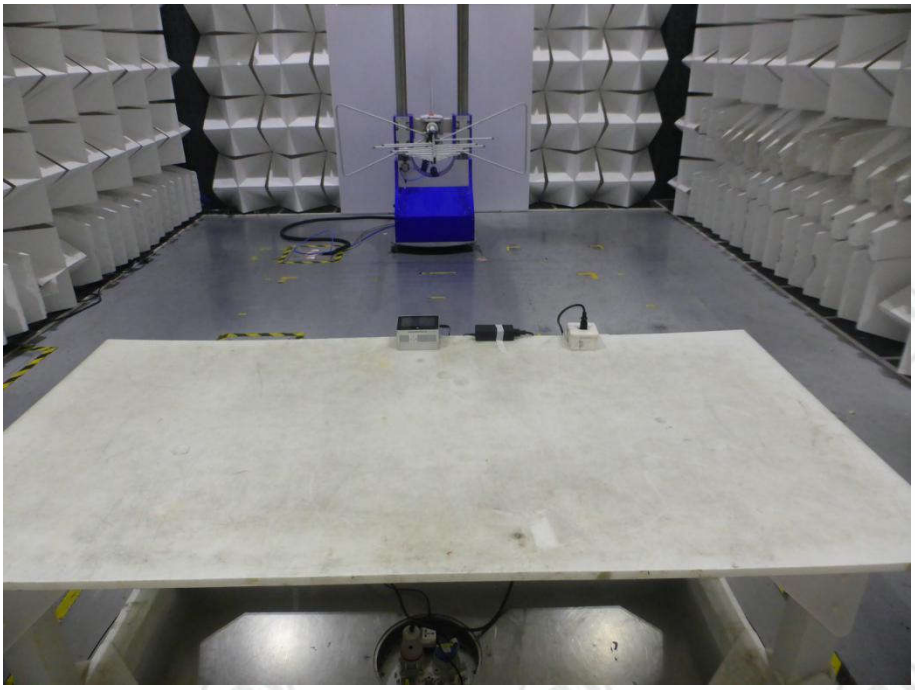
Final Test Level =Receiver Reading -Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

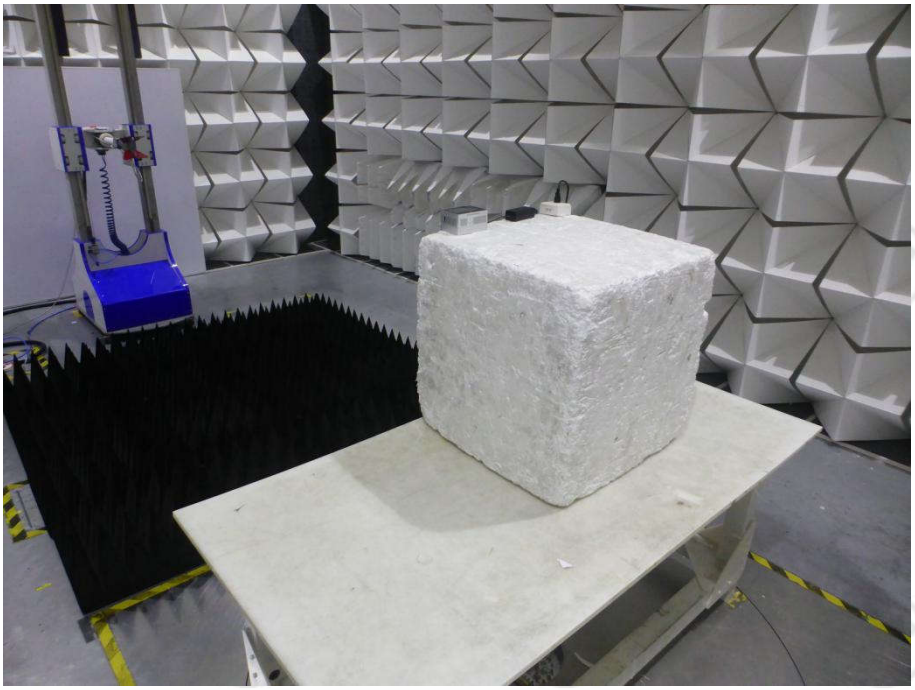
3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

PHOTOGRAPHS OF TEST SETUP

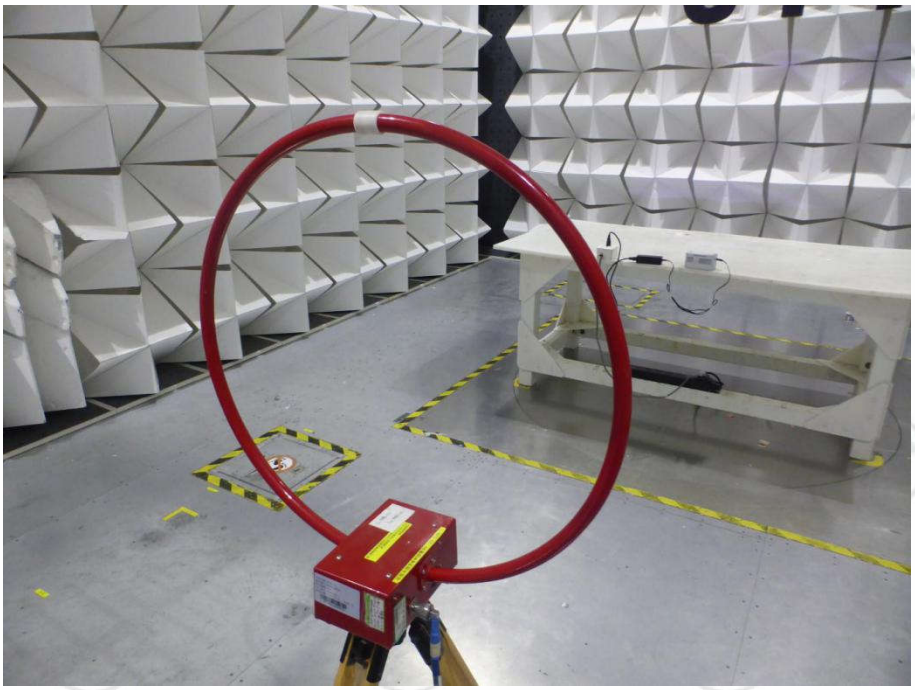
Test model No.: L400 PAD



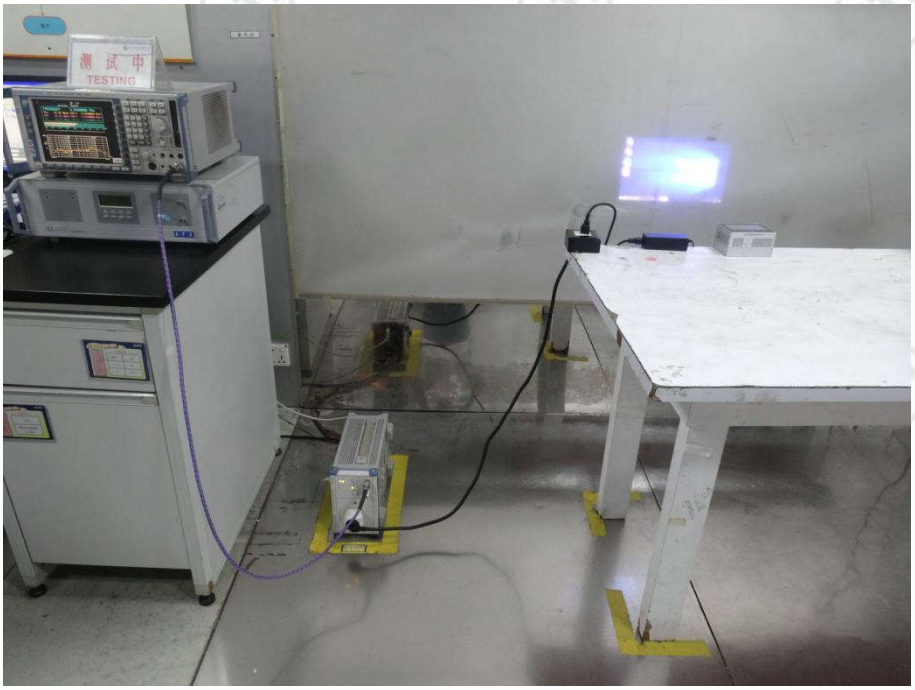
Radiated spurious emission Test Setup-1(Below 1GHz)



Radiated spurious emission Test Setup-2(Above 1GHz)



Radiated spurious emission Test Setup-3(9KHz-30MHz)

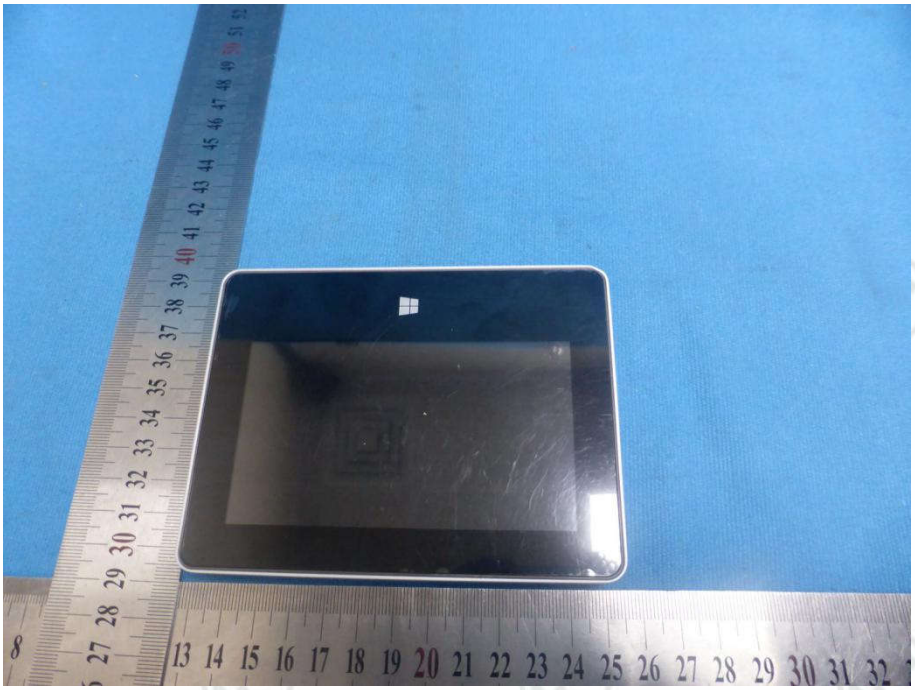


Conducted Emissions Test Setup

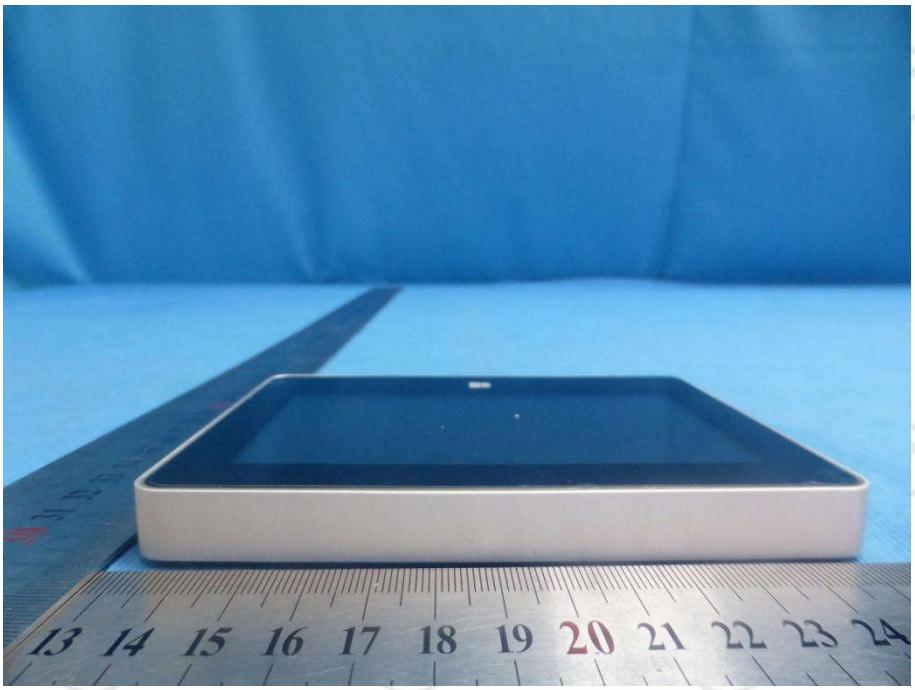
PHOTOGRAPHS OF EUT Constructional Details

Test model No.: L400 PAD

View of Product-1



View of Product-2

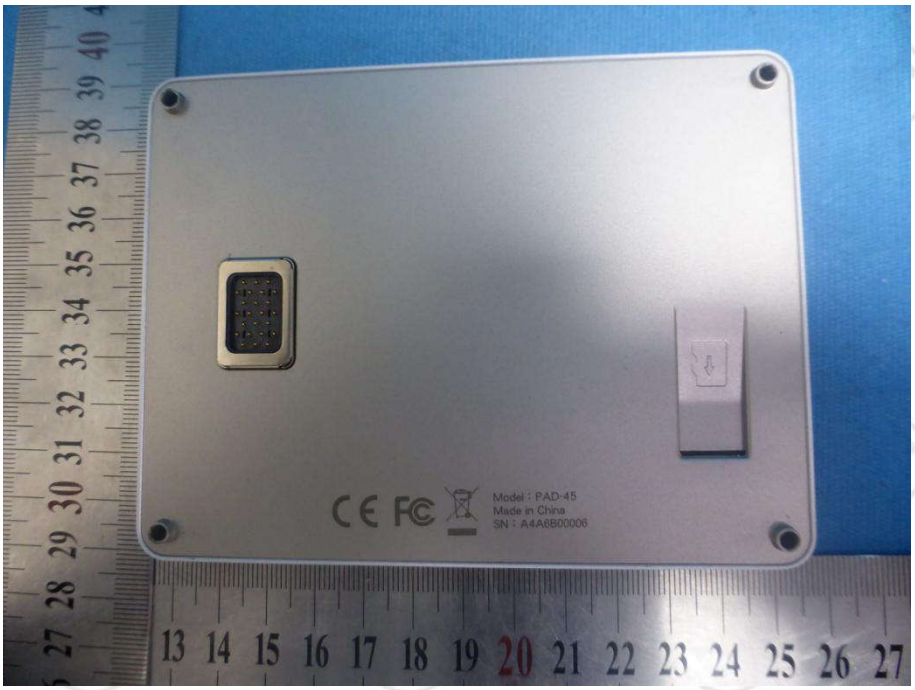


View of Product-3

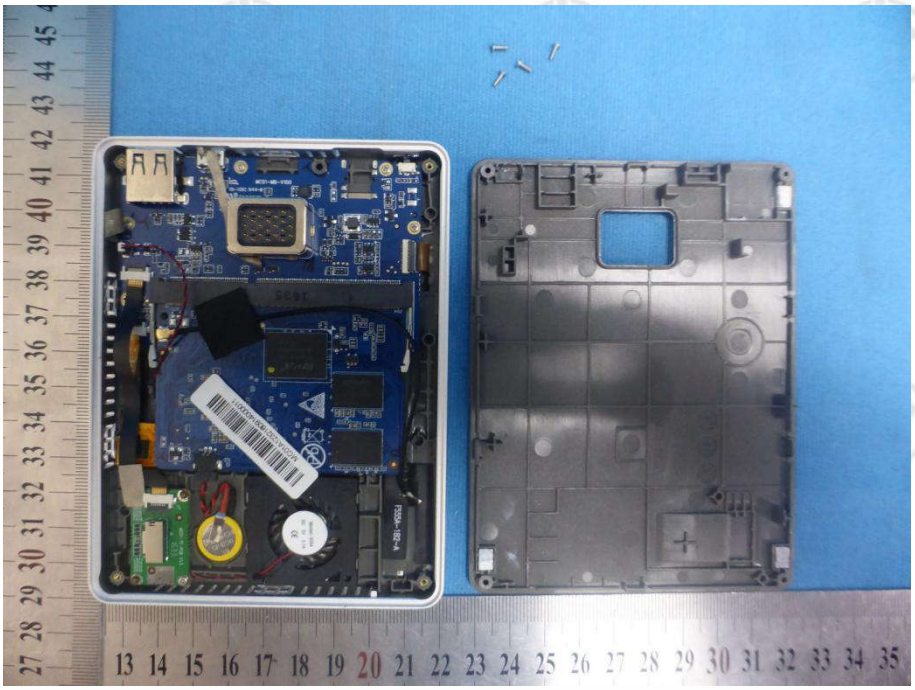
View of Product-4

View of Product-5

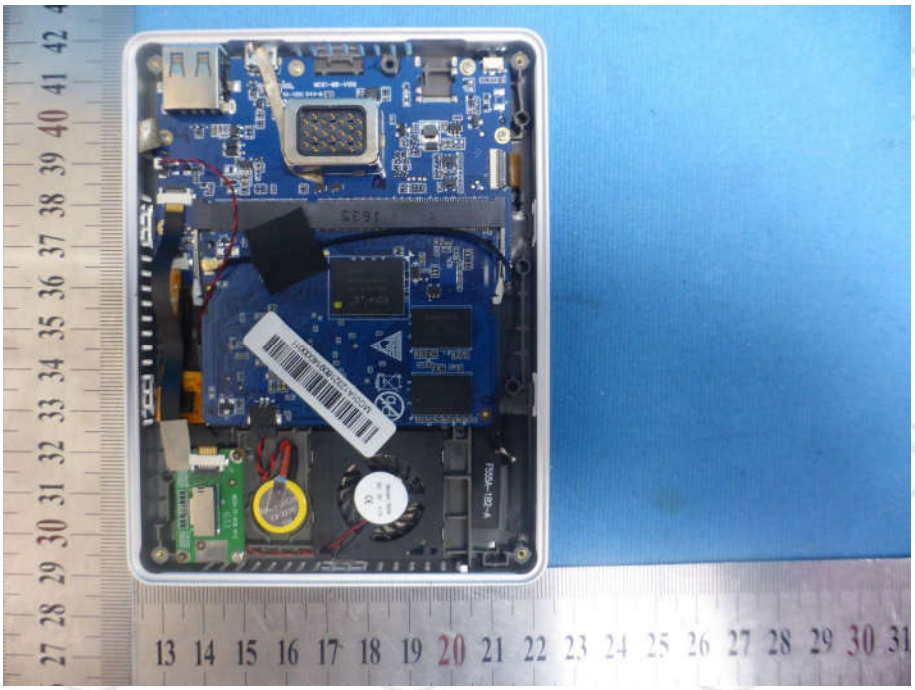
View of Product-6



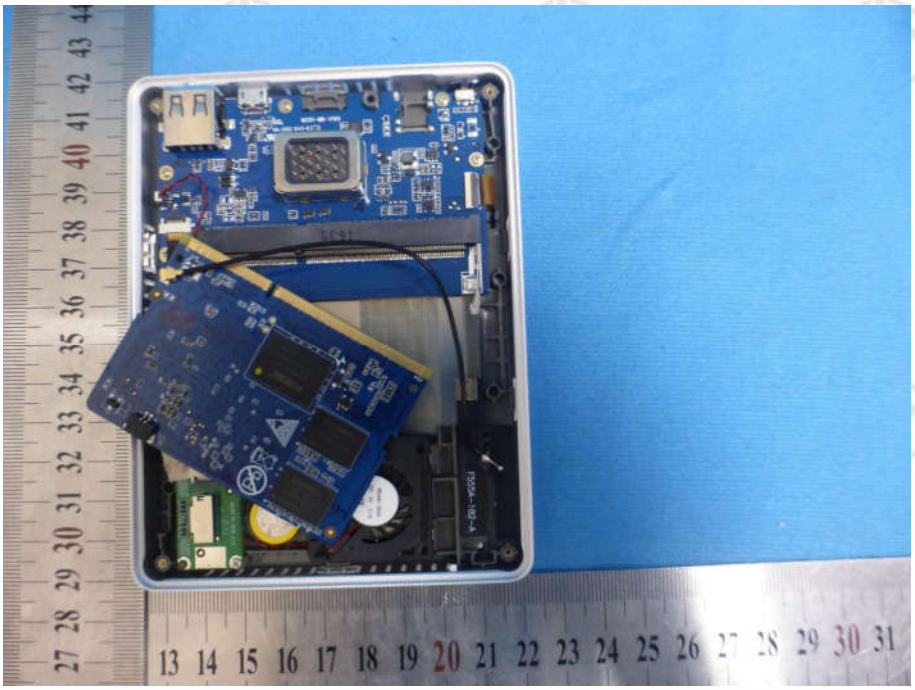
View of Product-7



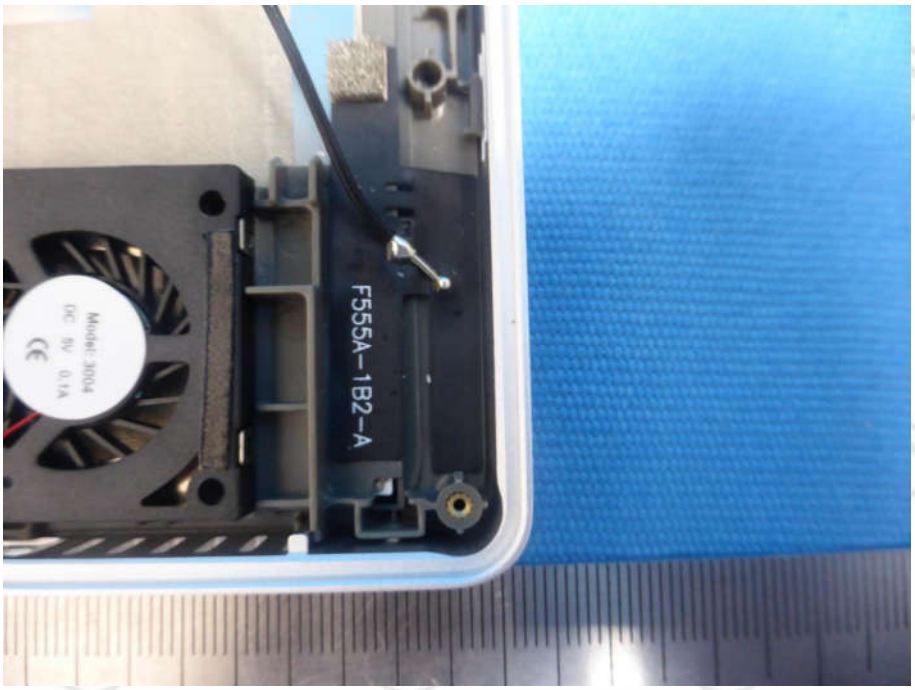
View of Product-8



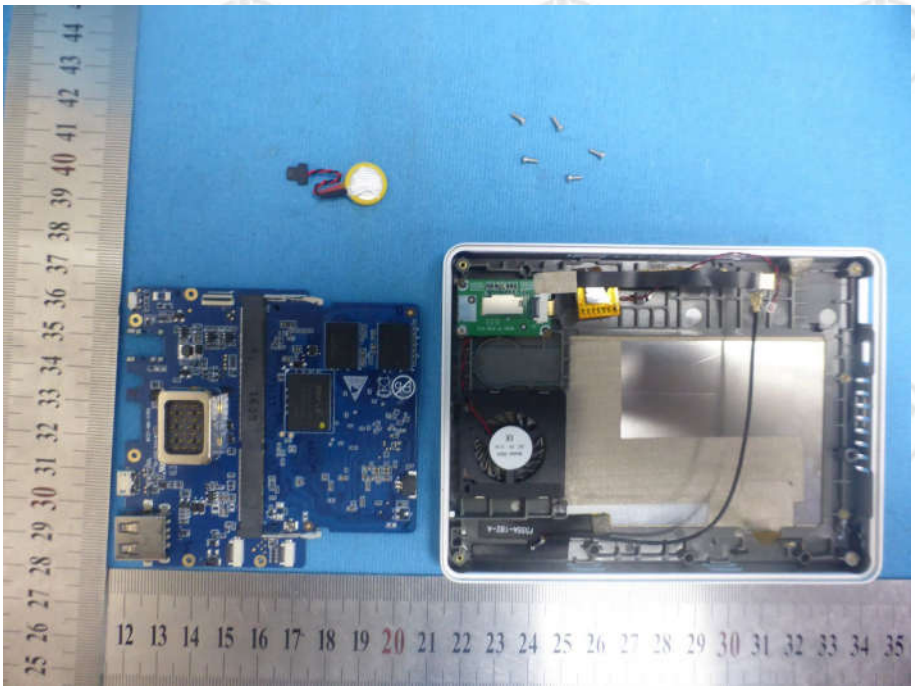
View of Product-9



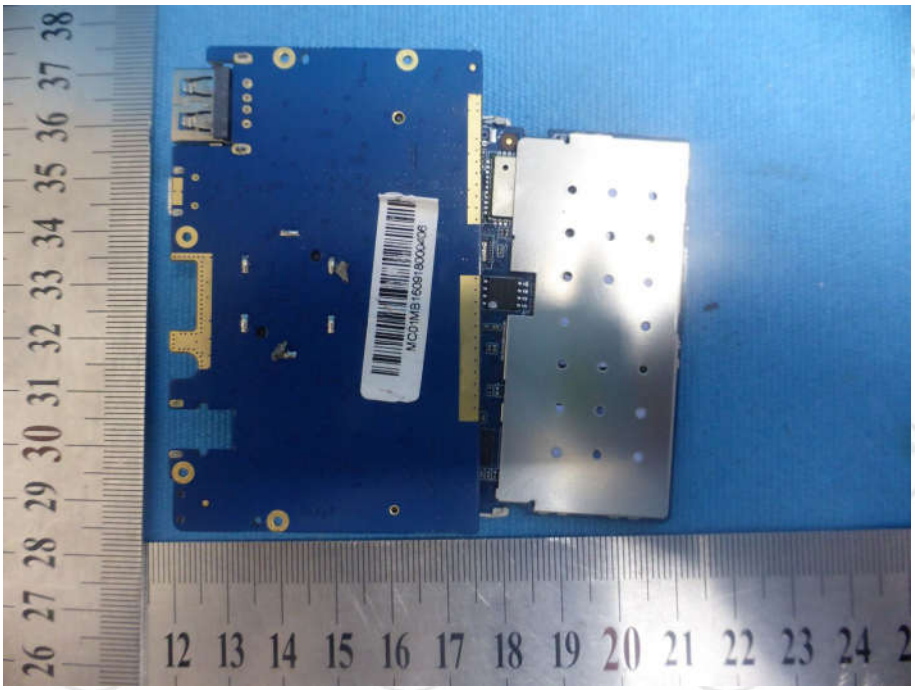
View of Product-10



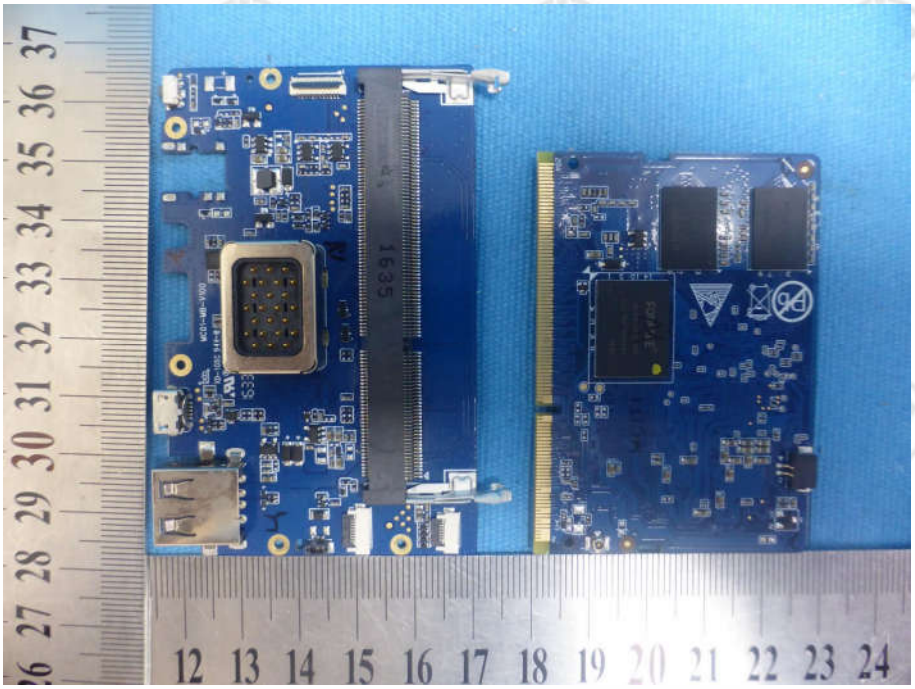
View of Product-11



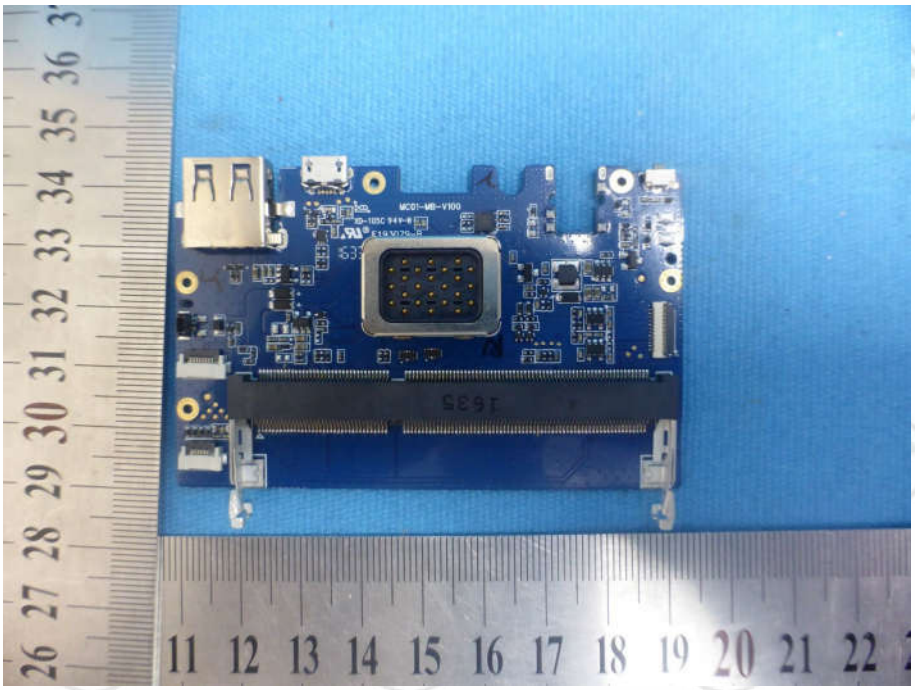
View of Product-12



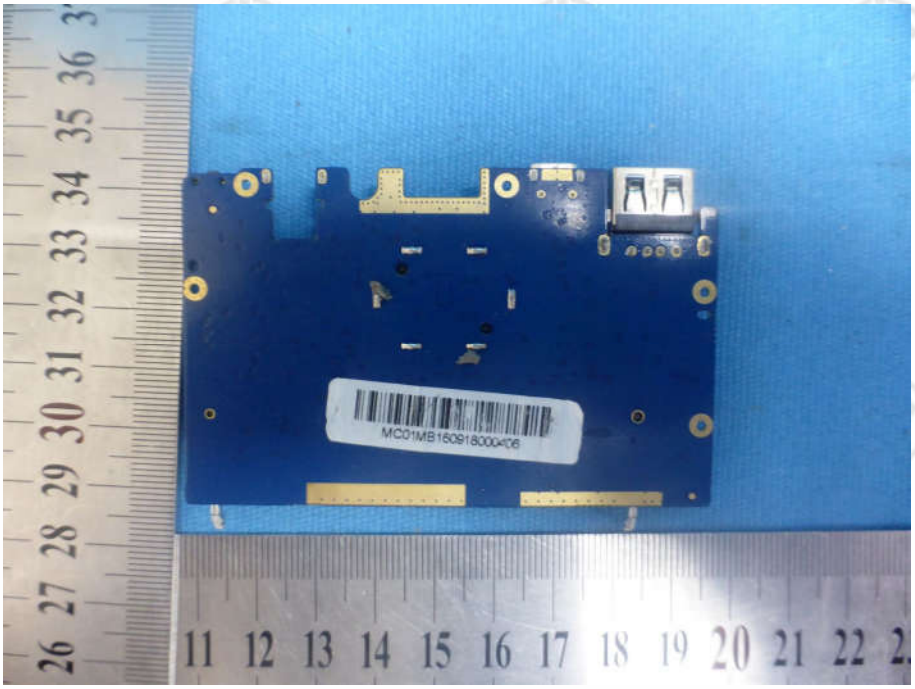
View of Product-13



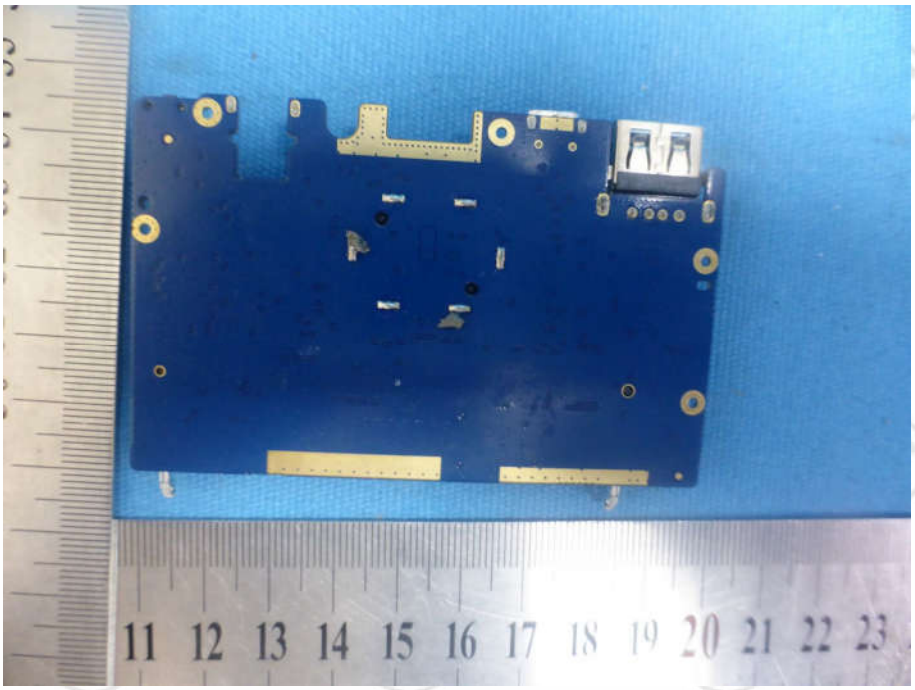
View of Product-14



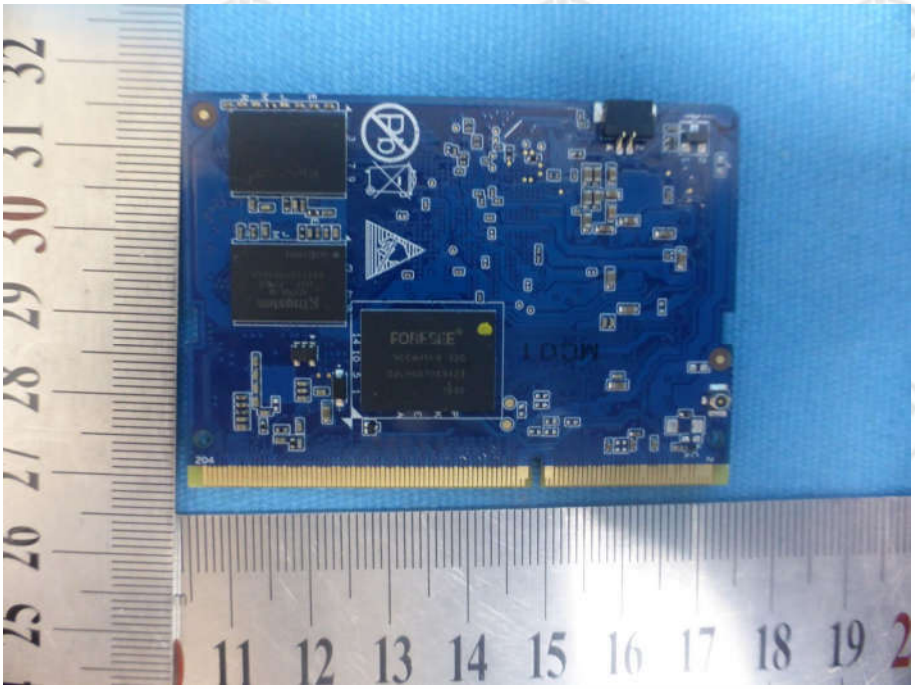
View of Product-15



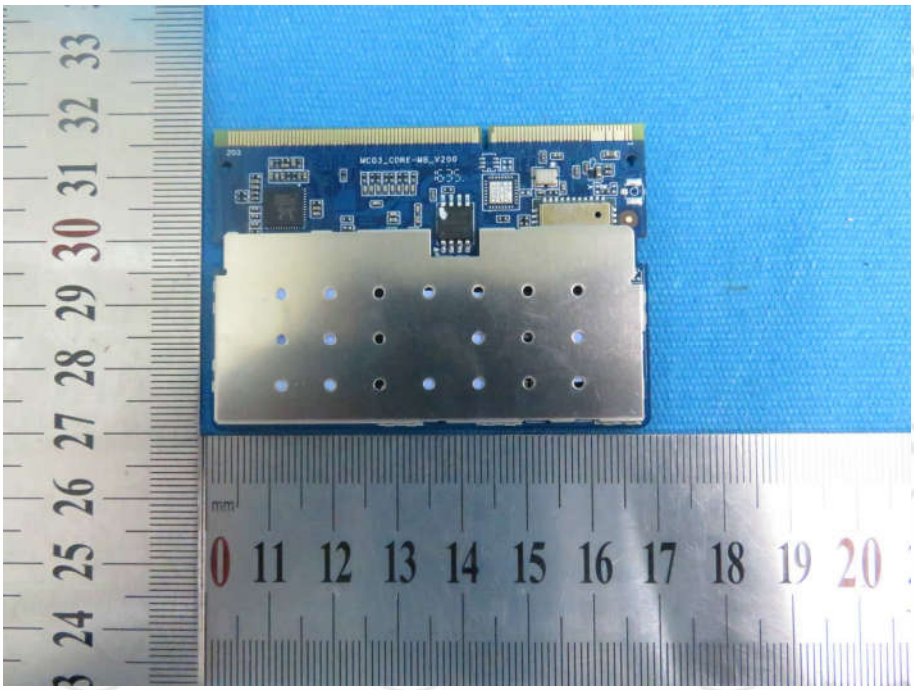
View of Product-16



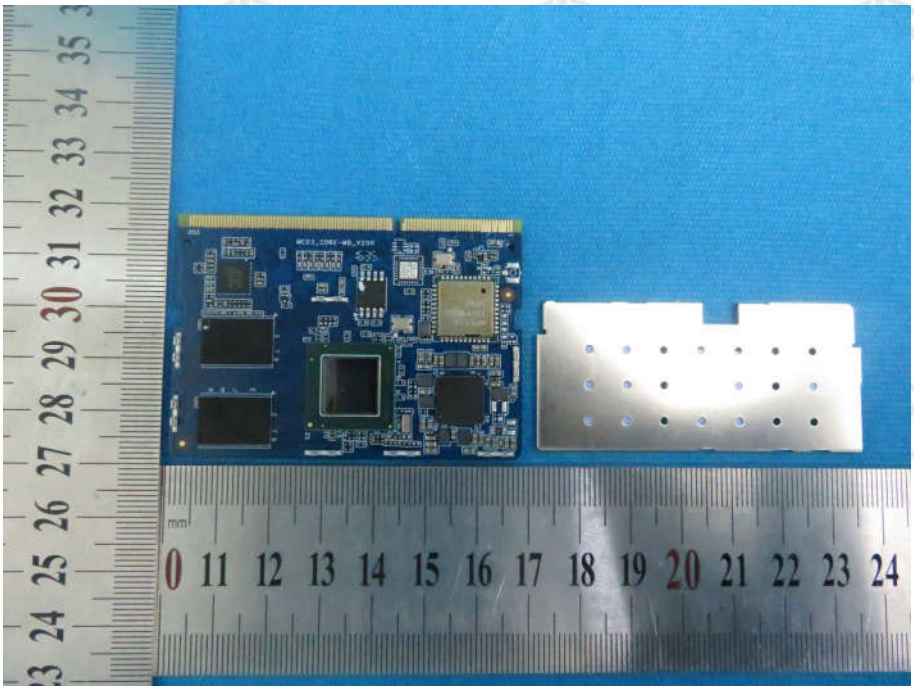
View of Product-17



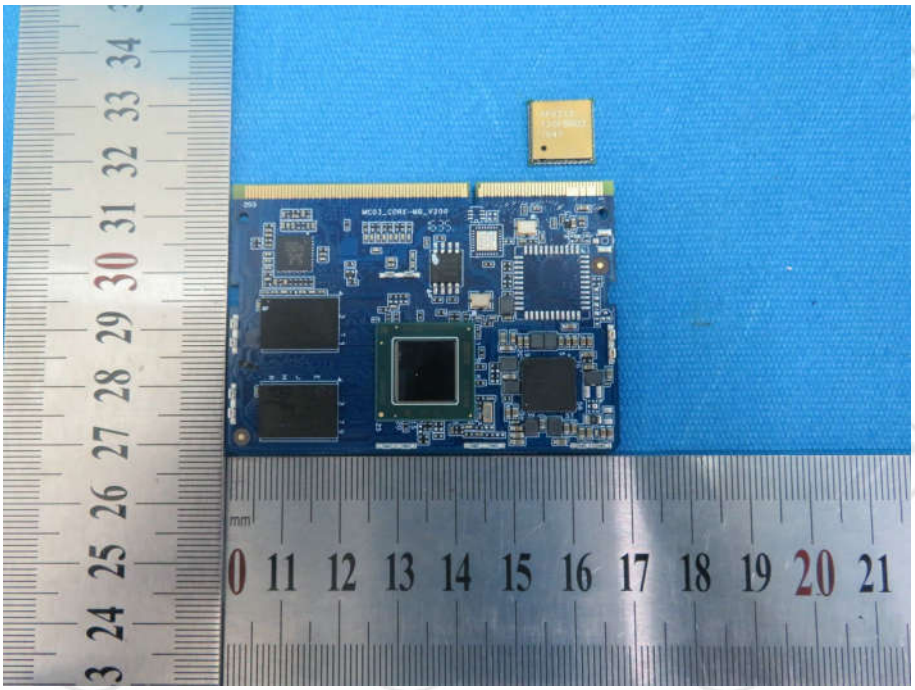
View of Product-18



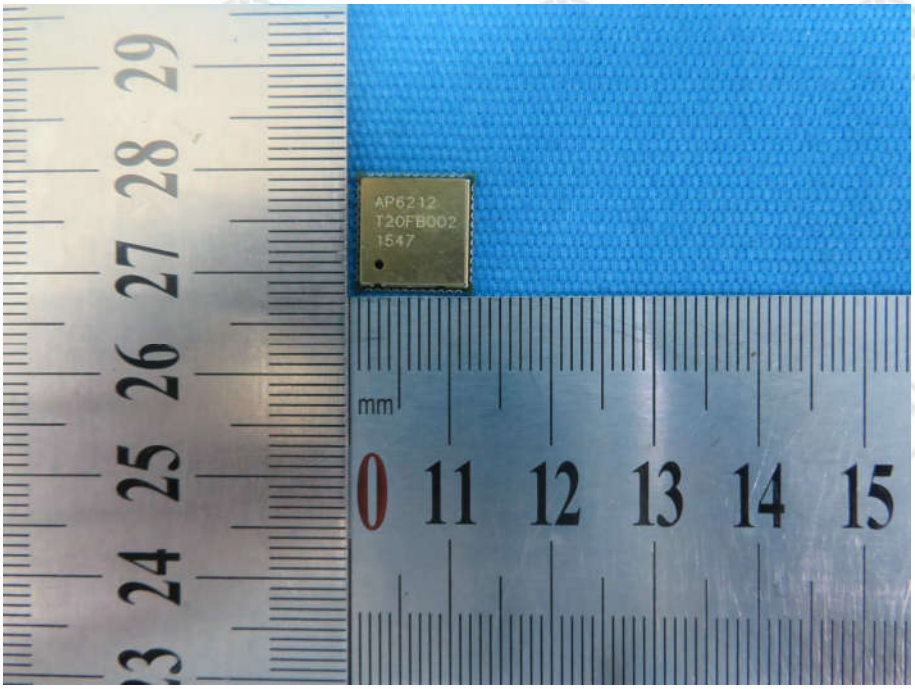
View of Product-19



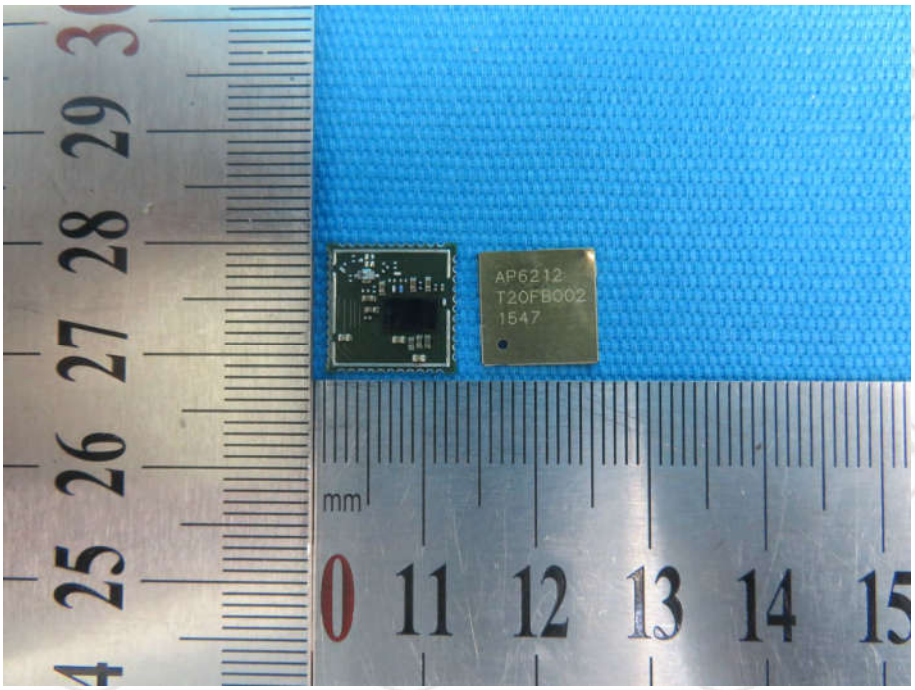
View of Product-20



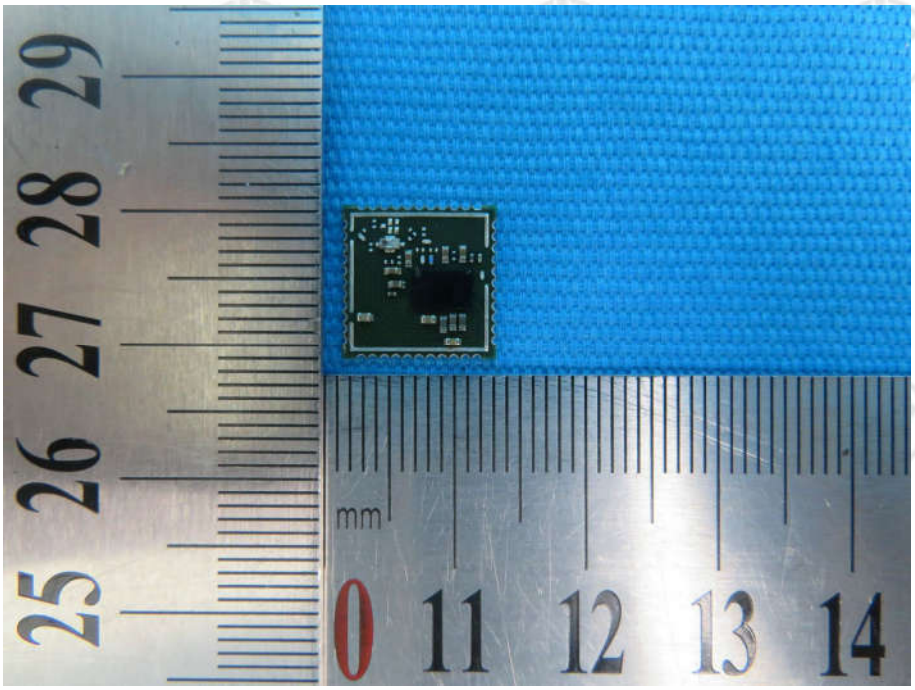
View of Product-21



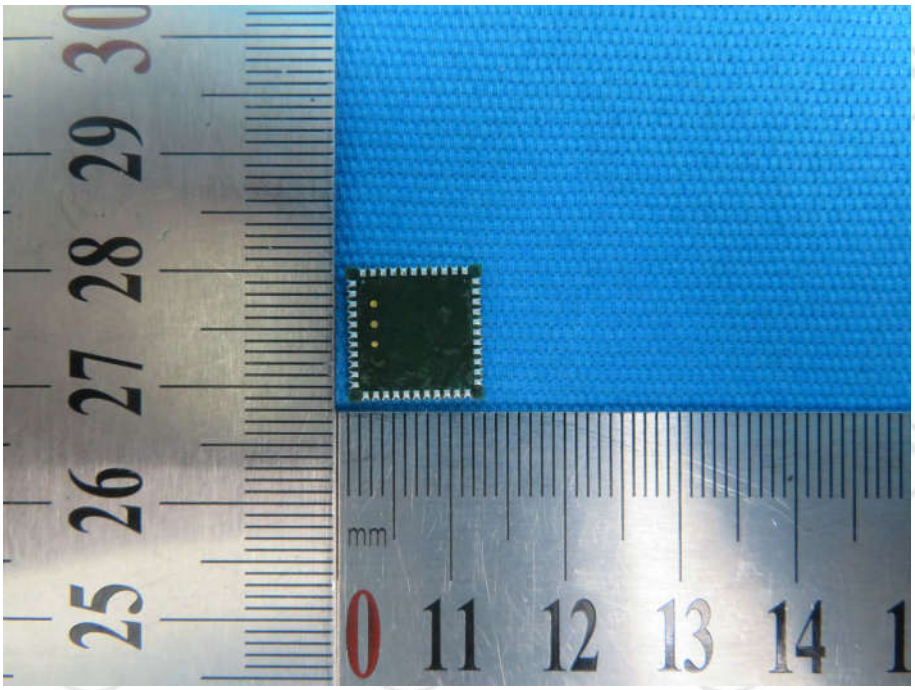
View of Product-22



View of Product-23



View of Product-24



View of Product-25

View of Product-26

View of Product-27

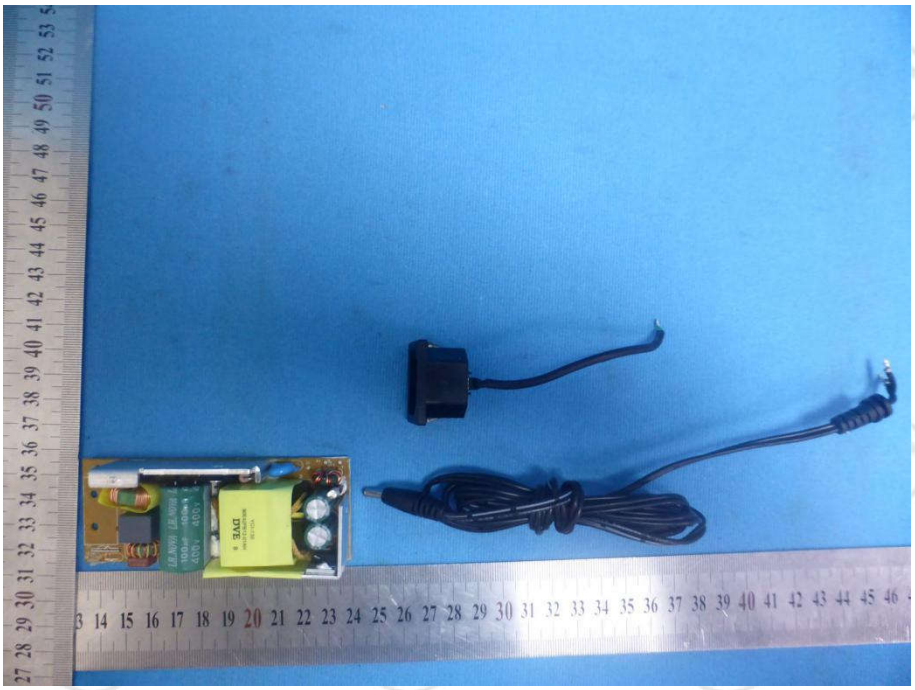
View of Product-28

View of Product-29

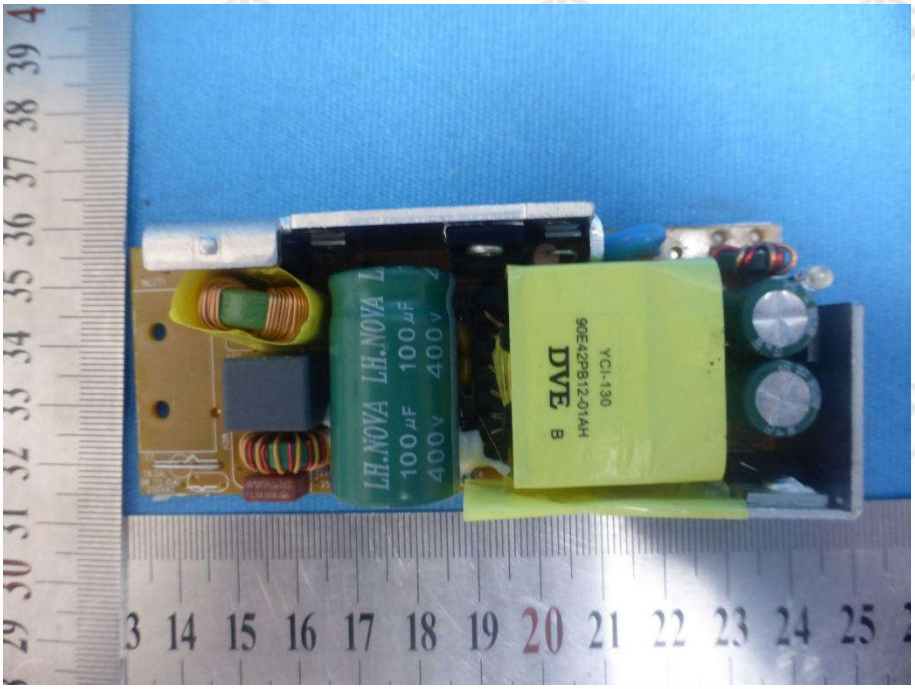
View of Product-30

View of Product-31

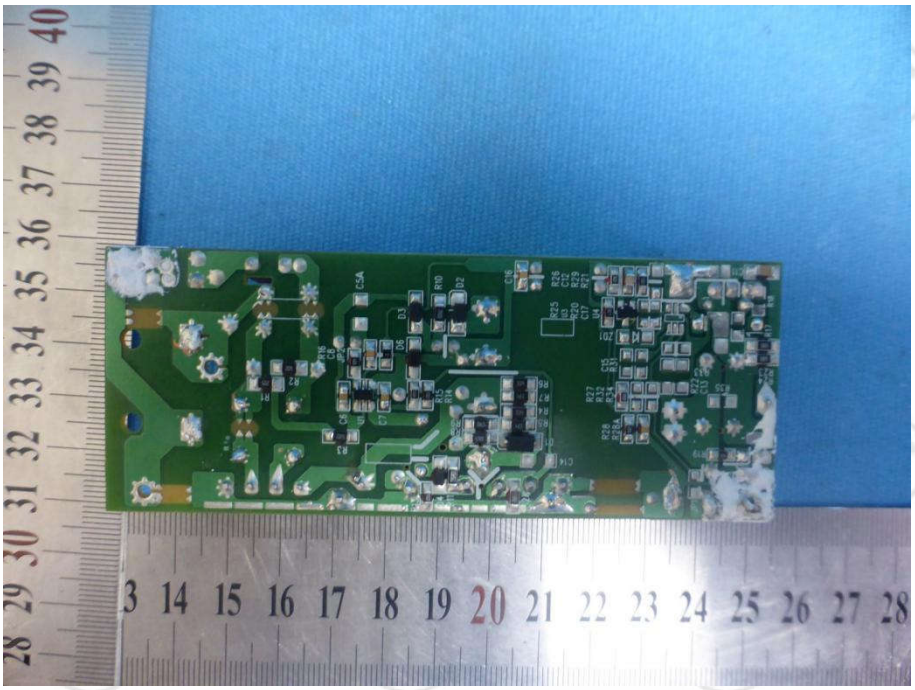
View of Product-32



View of Product-33



View of Product-34



View of Product-35

*** End of Report ***