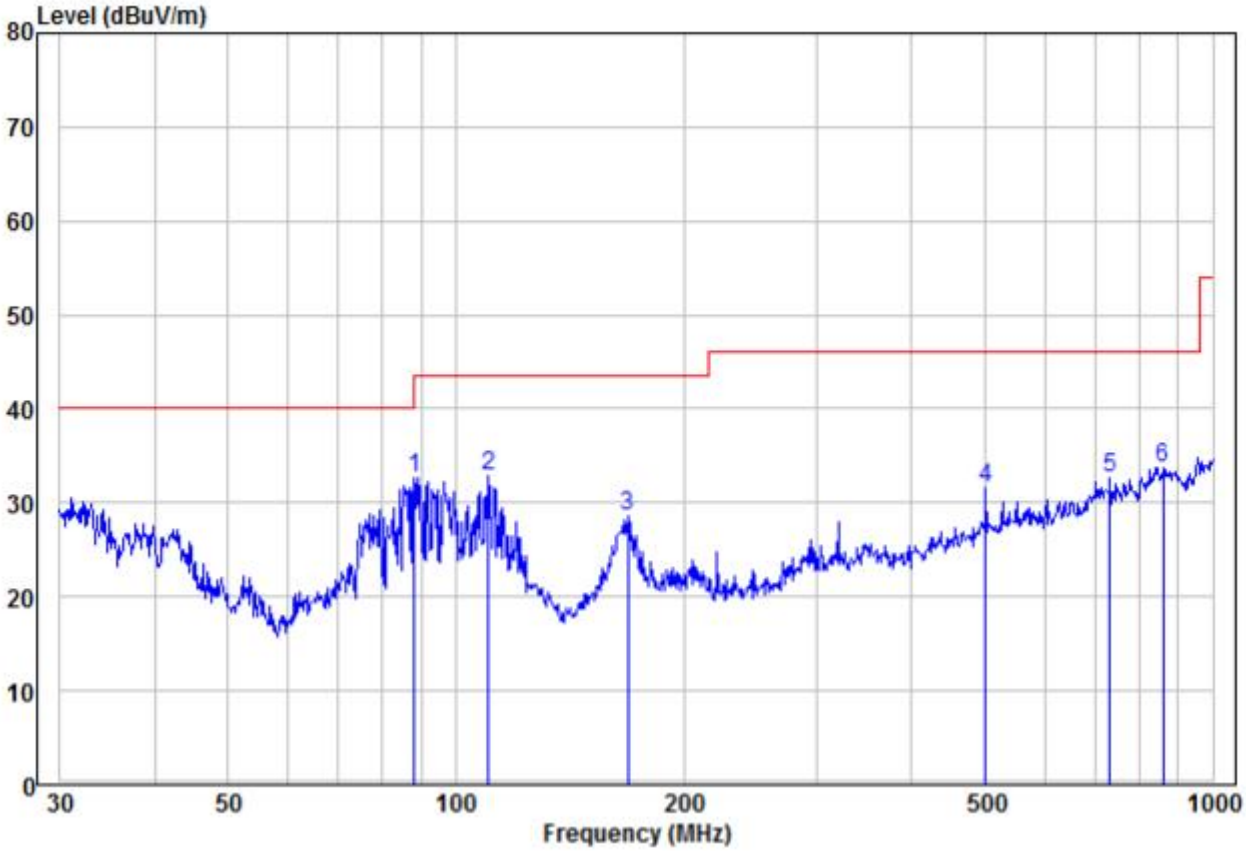
	d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum 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. g. Test the EUT in the lowest channel (2402MHz),the middle channel (2441MHz),the Highest channel (2480MHz) h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Non-hopping transmitting mode with all kind of modulation and all kind of data type Transmitting mode
Final Test Mode:	Only the worst case is recorded in the report.
Test Results:	Pass

5.11.1 Radiated Emission below 1GHz

1#

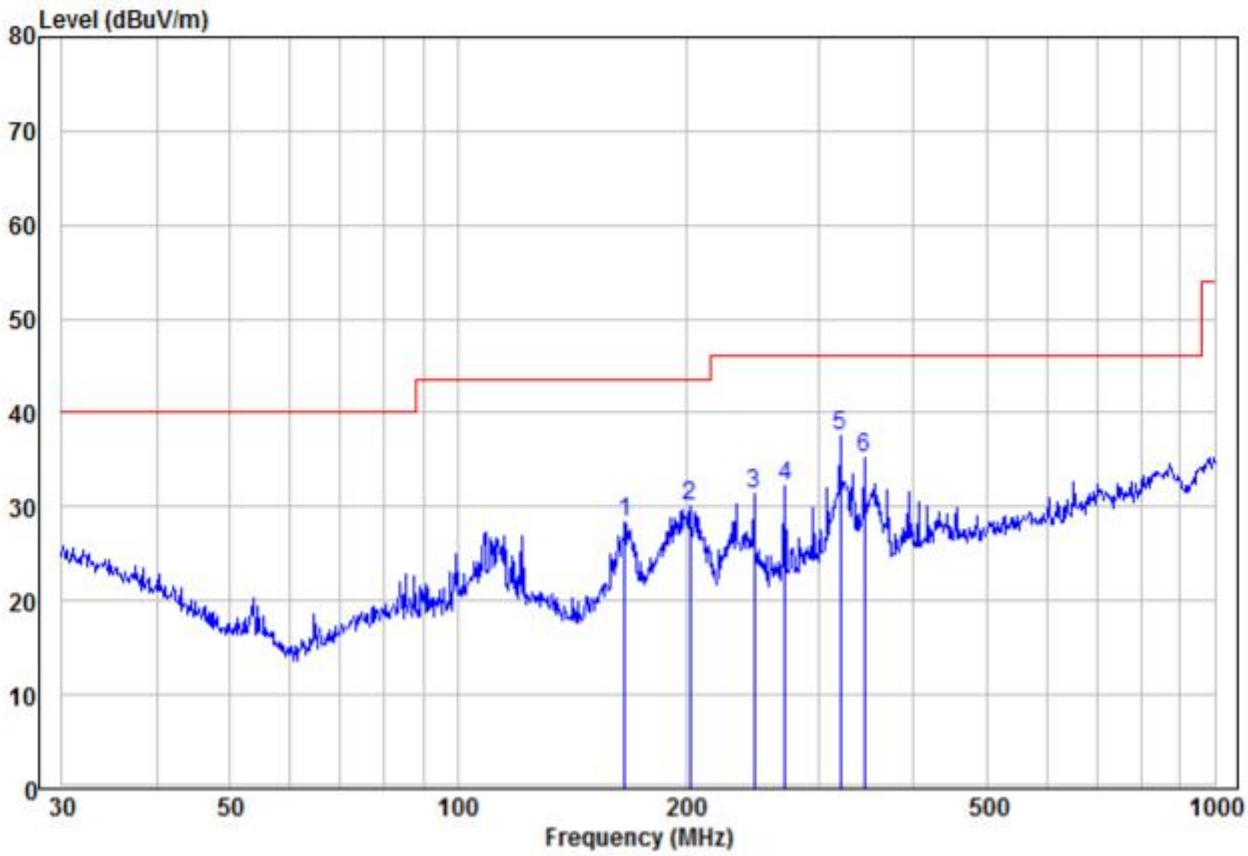
30MHz~1GHz		
Test mode:	Transmitting	Vertical



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	88.03	22.69	9.97	32.66	43.50	-10.84	Peak	VERTICAL
2 pp	110.57	22.63	10.21	32.84	43.50	-10.66	Peak	VERTICAL
3	169.01	20.87	7.64	28.51	43.50	-14.99	Peak	VERTICAL
4	501.18	13.22	18.29	31.51	46.00	-14.49	Peak	VERTICAL
5	731.92	11.33	21.30	32.63	46.00	-13.37	Peak	VERTICAL
6	860.04	9.75	24.01	33.76	46.00	-12.24	Peak	VERTICAL

Remark:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Factor= Antenna Factor + Cable Factor – Preamplifier Factor,
Level = Read Level + Factor,
Over Limit=Level-Limit Line.

Test mode:	Transmitting	Horizontal

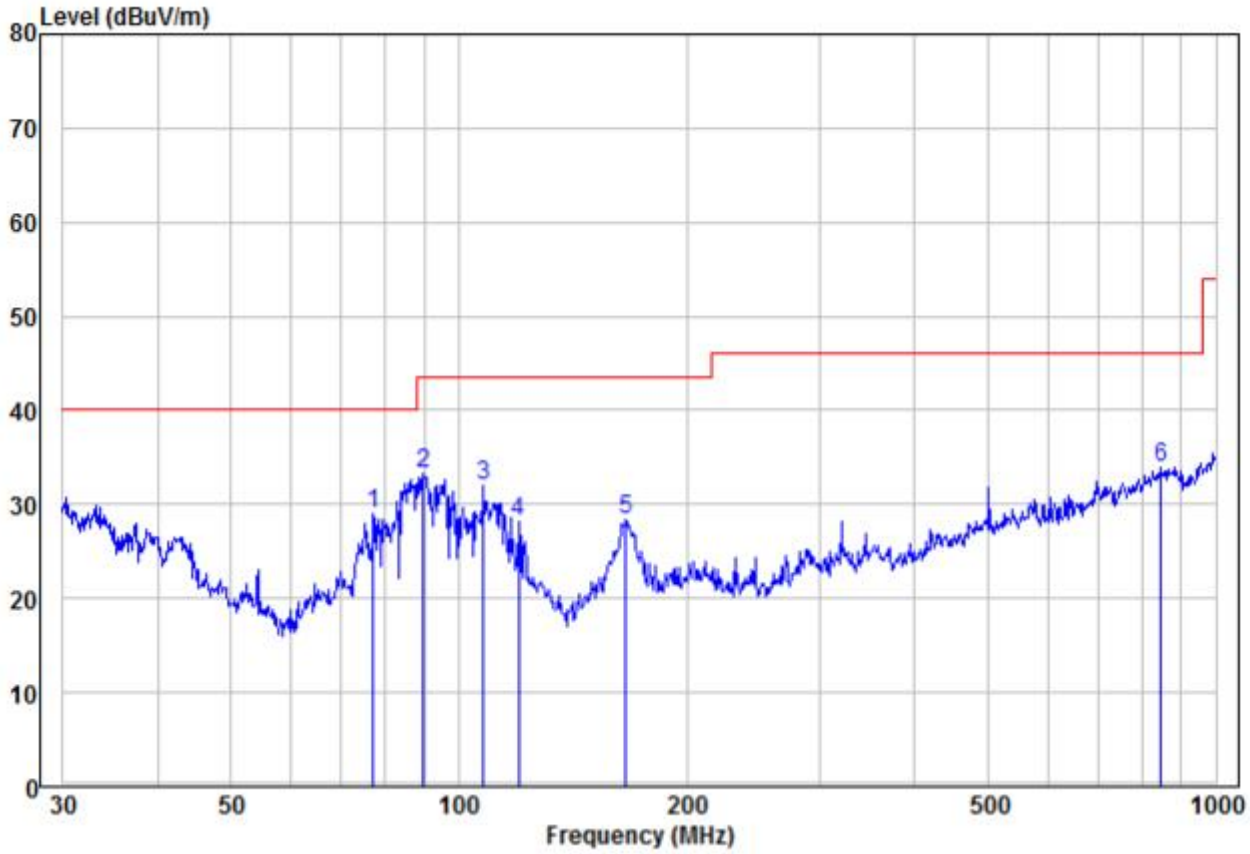


	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	166.07	20.60	7.69	28.29	43.50	-15.21	Peak	HORIZONTAL
2	202.81	21.51	8.58	30.09	43.50	-13.41	Peak	HORIZONTAL
3	245.95	19.40	11.95	31.35	46.00	-14.65	Peak	HORIZONTAL
4	270.37	19.54	12.75	32.29	46.00	-13.71	Peak	HORIZONTAL
5 pp	319.94	23.33	14.22	37.55	46.00	-8.45	Peak	HORIZONTAL
6	344.39	20.35	14.81	35.16	46.00	-10.84	Peak	HORIZONTAL

Remark:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Factor= Antenna Factor + Cable Factor – Preamplifier Factor,
Level = Read Level + Factor,
Over Limit=Level-Limit Line.

2#

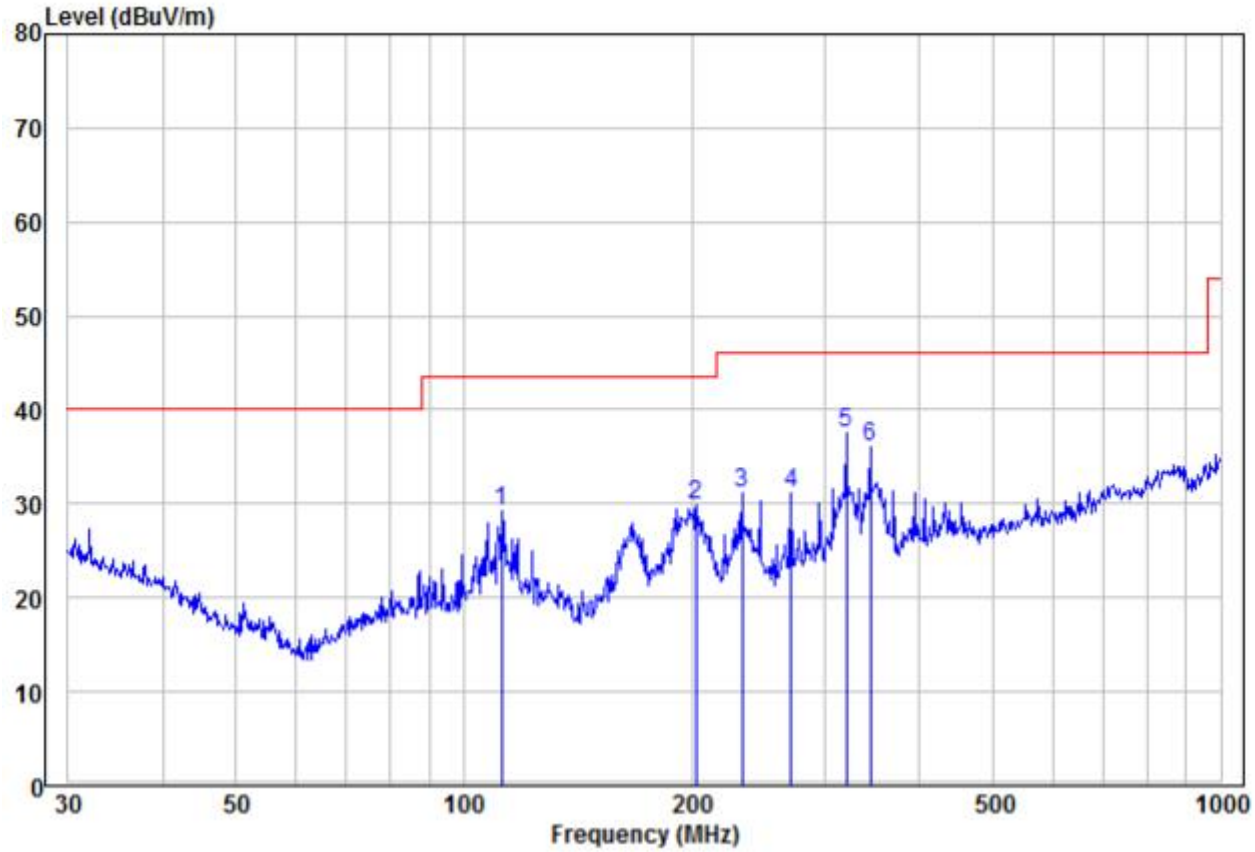
30MHz~1GHz		
Test mode:	Transmitting	Vertical



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	77.05	19.77	9.31	29.08	40.00	-10.92	Peak	VERTICAL
2 pp	89.90	23.22	10.02	33.24	43.50	-10.26	Peak	VERTICAL
3	107.89	21.62	10.28	31.90	43.50	-11.60	Peak	VERTICAL
4	119.86	17.50	10.69	28.19	43.50	-15.31	Peak	VERTICAL
5	166.07	20.69	7.69	28.38	43.50	-15.12	Peak	VERTICAL
6	848.06	9.88	24.06	33.94	46.00	-12.06	Peak	VERTICAL

Remark:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Factor= Antenna Factor + Cable Factor – Preamplifier Factor,
Level = Read Level + Factor,
Over Limit=Level-Limit Line.

Test mode:	Transmitting	Horizontal



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	112.13	18.96	10.29	29.25	43.50	-14.25	Peak	HORIZONTAL
2	202.81	21.37	8.58	29.95	43.50	-13.55	Peak	HORIZONTAL
3	233.35	20.38	10.82	31.20	46.00	-14.80	Peak	HORIZONTAL
4	270.37	18.48	12.75	31.23	46.00	-14.77	Peak	HORIZONTAL
5 pp	319.94	23.29	14.22	37.51	46.00	-8.49	Peak	HORIZONTAL
6	344.39	21.15	14.81	35.96	46.00	-10.04	Peak	HORIZONTAL

Remark:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Factor= Antenna Factor + Cable Factor – Preamplifier Factor,
Level = Read Level + Factor,
Over Limit=Level-Limit Line.

5.11.2 Transmitter Emission above 1GHz

Worse case mode:		GFSK(DH5)		Test channel:		Lowest	
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Over (dB)	Detector Type	Ant. Pol. H/V
2390	55.92	-9.2	46.72	74	-27.28	**Peak**	**H**
2400	54.77	-9.39	45.38	74	-28.62	Peak	H
4804	53.13	-4.33	48.80	74	-25.20	Peak	H
7206	48.92	1.01	49.93	74	-24.07	Peak	H
2390	55.80	-9.2	46.60	74	-27.40	**Peak**	**V**
2400	55.60	-9.39	46.21	74	-27.79	Peak	V
4804	54.15	-4.33	49.82	74	-24.18	Peak	V
7206	49.50	1.01	50.51	74	-23.49	Peak	V

Worse case mode:		GFSK(DH5)		Test channel:		Middle	
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Over (dB)	Detector Type	Ant. Pol. H/V
4882	51.70	-4.11	47.59	74	-26.41	peak	H
7323	49.28	1.51	50.79	74	-23.21	peak	H
4882	51.76	-4.11	47.65	74	-26.35	peak	V
7323	48.32	1.51	49.83	74	-24.17	peak	V

Worse case mode:		GFSK(DH5)		Test channel:		Highest	
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Over (dB)	Detector Type	Ant. Pol. H/V
2483.5	55.93	-9.29	46.64	74	-27.36	**Peak**	**H**
4960	51.81	-4.04	47.77	74	-26.23	Peak	H
7440	49.02	1.57	50.59	74	-23.41	Peak	H
2483.5	55.46	-9.29	46.17	74	-27.83	**Peak**	**V**
4960	50.40	-4.04	46.36	74	-27.64	Peak	V
7440	50.22	1.57	51.79	74	-22.21	Peak	V

Worse case mode:		π /4DQPSK (2DH5)		Test channel:		Lowest	
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Over (dB)	Detector Type	Ant. Pol. H/V
2390	55.71	-9.2	46.51	74	-27.49	**Peak**	**H**
2400	56.38	-9.39	46.99	74	-27.01	Peak	H
4804	53.40	-4.33	49.07	74	-24.93	Peak	H
7206	50.61	1.01	51.62	74	-22.38	Peak	H
2390	54.11	-9.2	44.91	74	-29.09	**Peak**	**V**
2400	56.95	-9.39	47.56	74	-26.44	Peak	V
4804	53.94	-4.33	49.61	74	-24.39	Peak	V
7206	48.55	1.01	49.56	74	-24.44	Peak	V

Worse case mode:		π /4DQPSK (2DH5)		Test channel:		Middle	
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Over (dB)	Detector Type	Ant. Pol. H/V
4882	50.89	-4.11	46.78	74	-27.22	peak	H
7323	49.45	1.51	50.96	74	-23.04	peak	H
4882	52.05	-4.11	47.94	74	-26.06	peak	V
7323	48.76	1.51	50.27	74	-23.73	peak	V

Worse case mode:		π /4DQPSK (2DH5)		Test channel:		Highest	
Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Over (dB)	Detector Type	Ant. Pol. H/V
2483.5	56.97	-9.29	47.68	74	-26.32	**Peak**	**H**
4960	53.02	-4.04	48.98	74	-25.02	Peak	H
7440	50.68	1.57	52.25	74	-21.75	Peak	H
2483.5	53.48	-9.29	44.19	74	-29.81	**Peak**	**V**
4960	51.03	-4.04	46.99	74	-27.01	Peak	V
7440	50.92	1.57	52.49	74	-21.51	Peak	V

Remark:

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

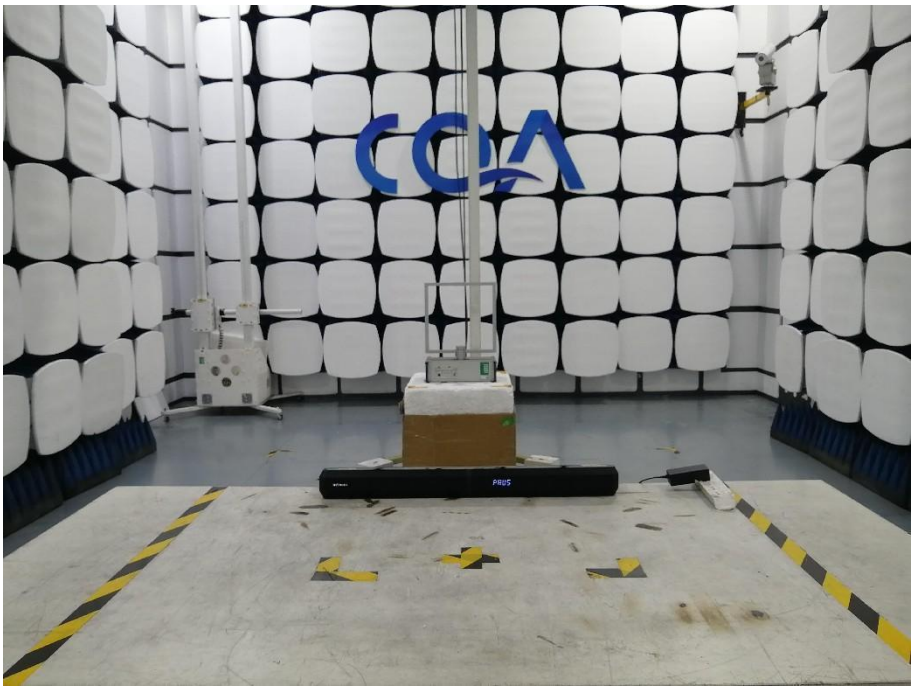
   Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

2) Scan from 9kHz to 25GHz, the disturbance above 10GHz and below 30MHz was very low. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.

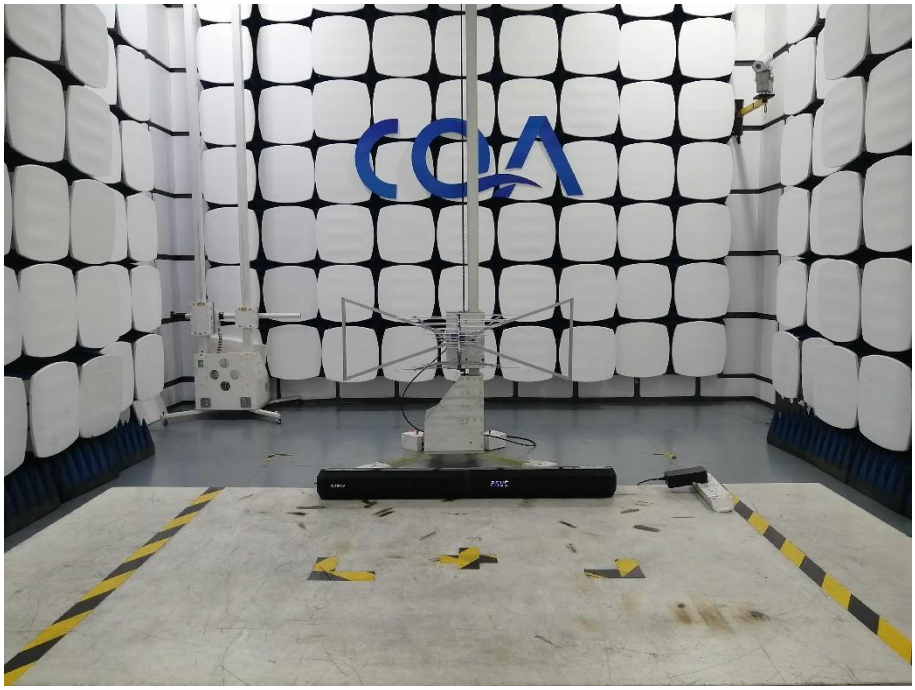
6 Photographs - EUT Test Setup

6.1 Radiated Emission

9KHz~30MHz:



30MHz~1GHz:

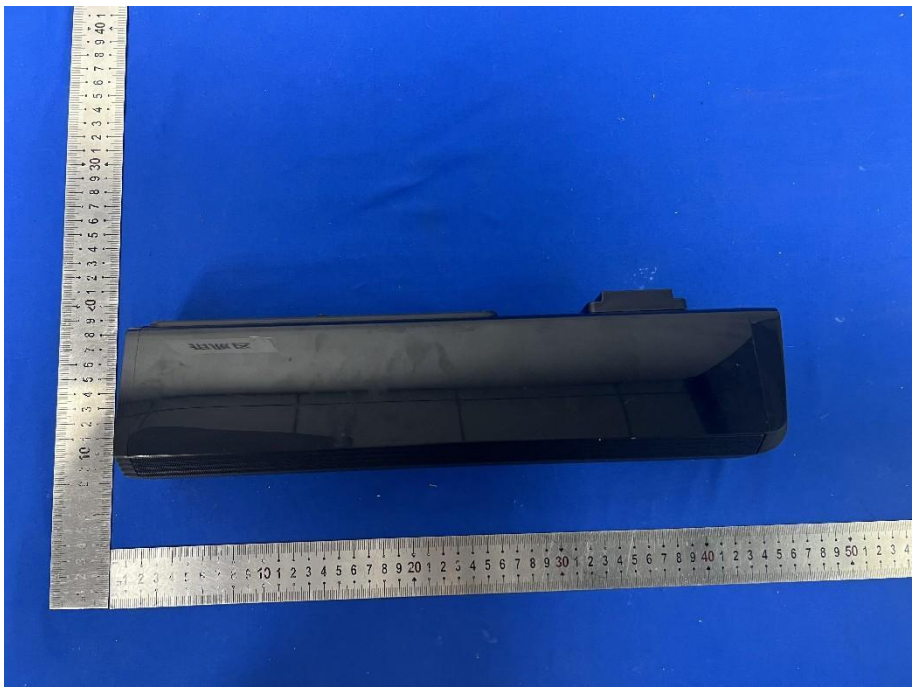


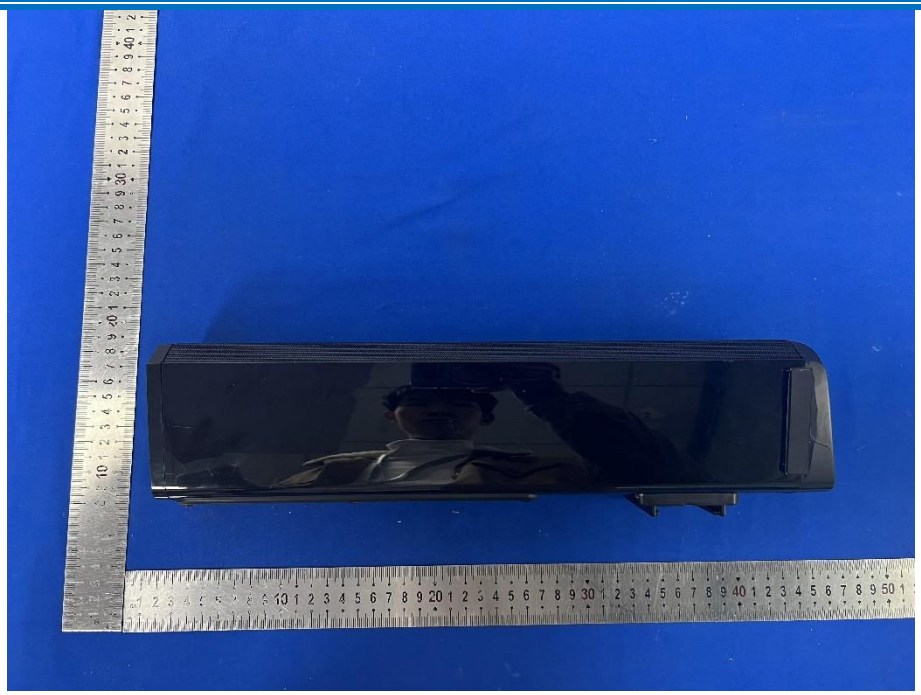
Above 1GHz:

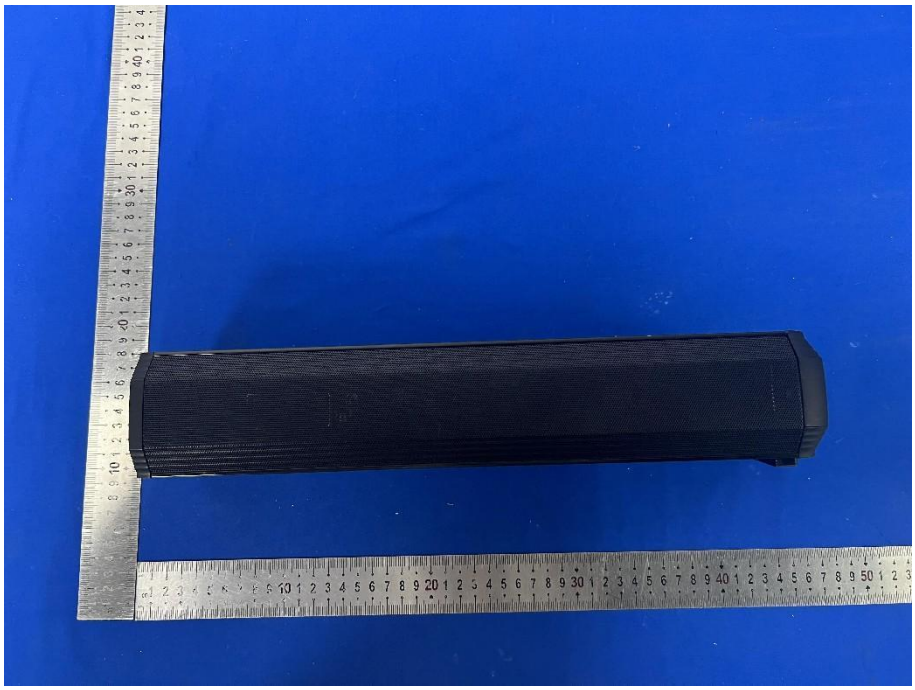
6.2 Conducted Emission

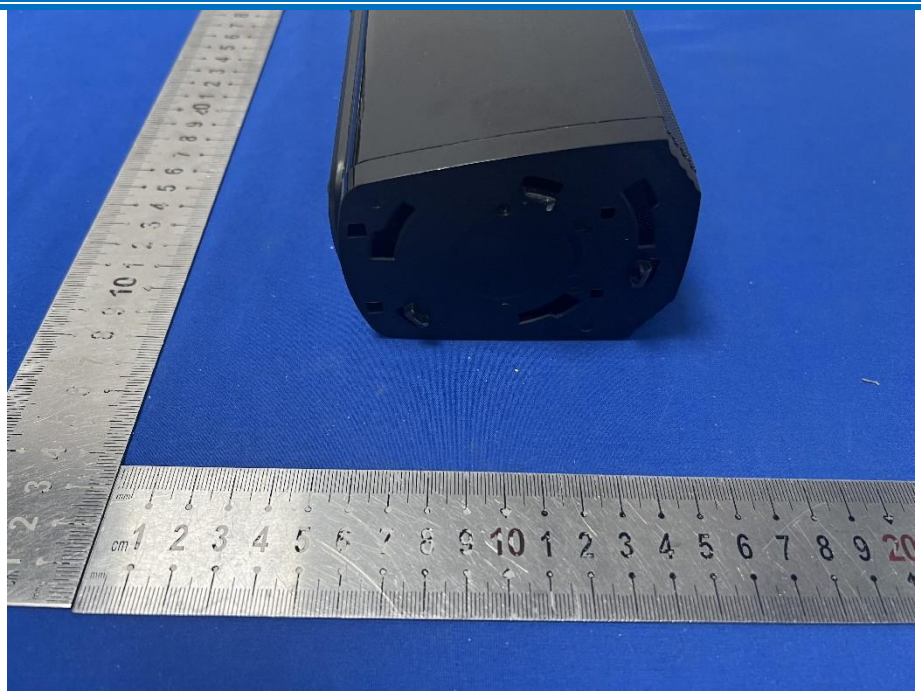
7 Photographs - EUT Constructional Details

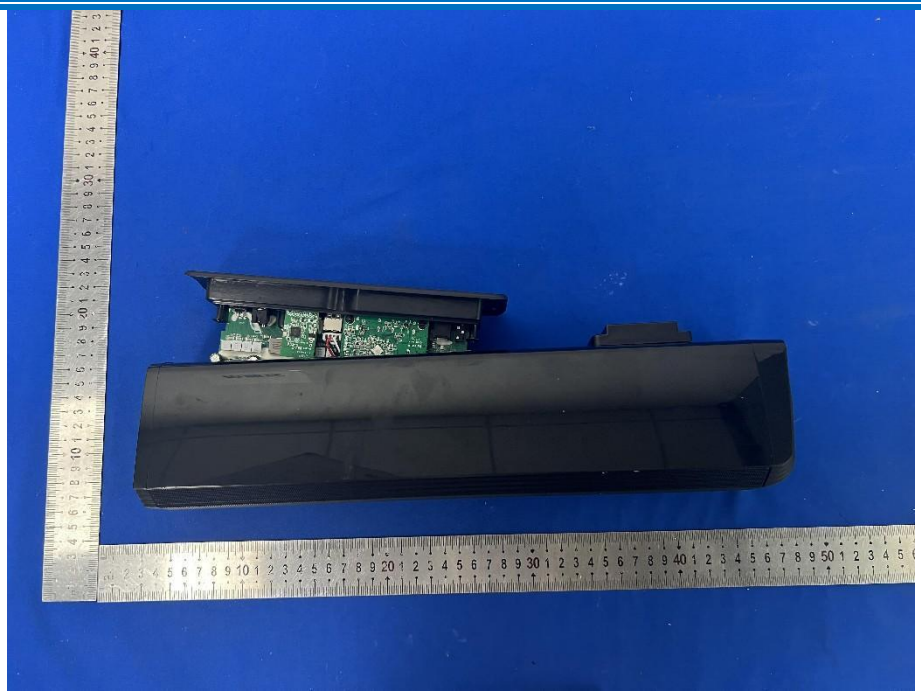
1#

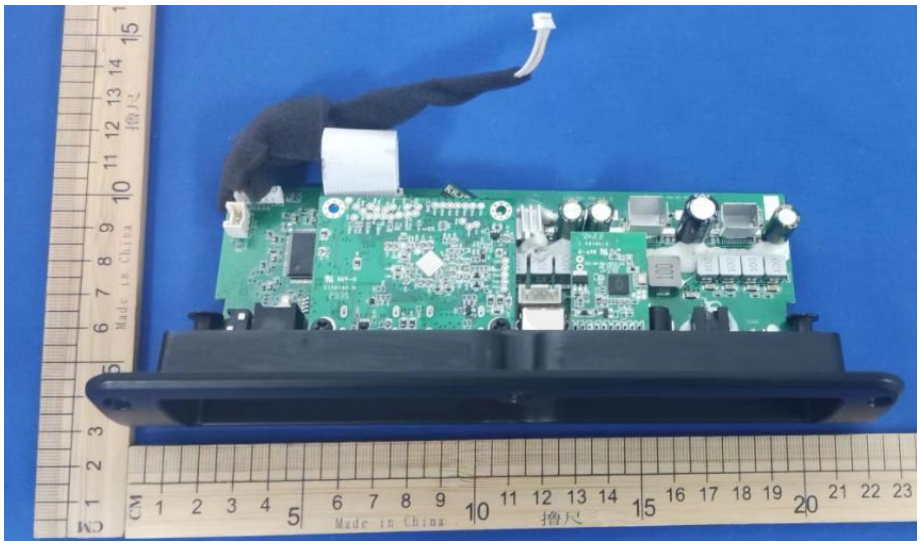


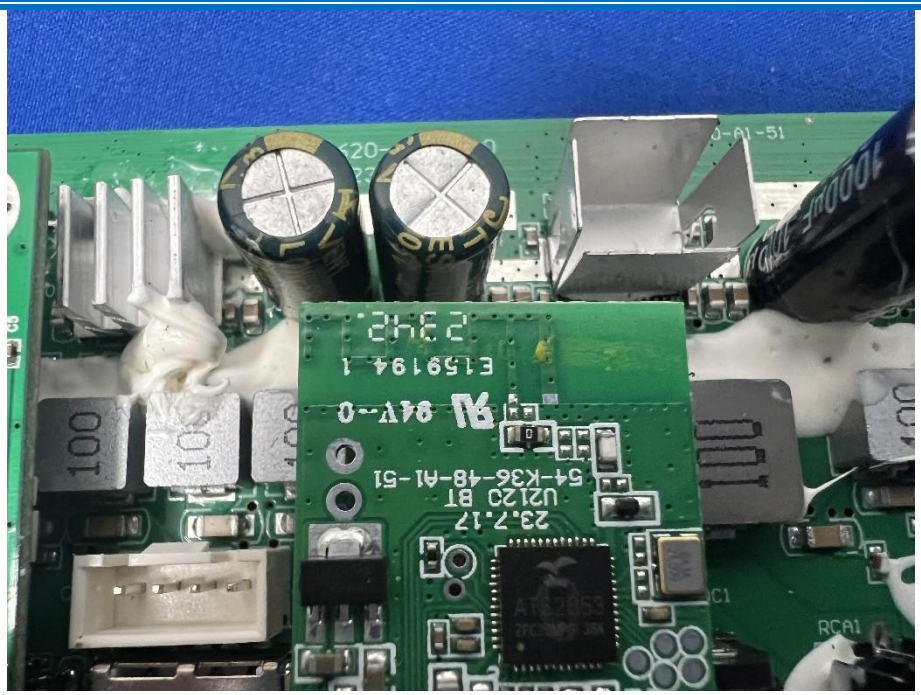


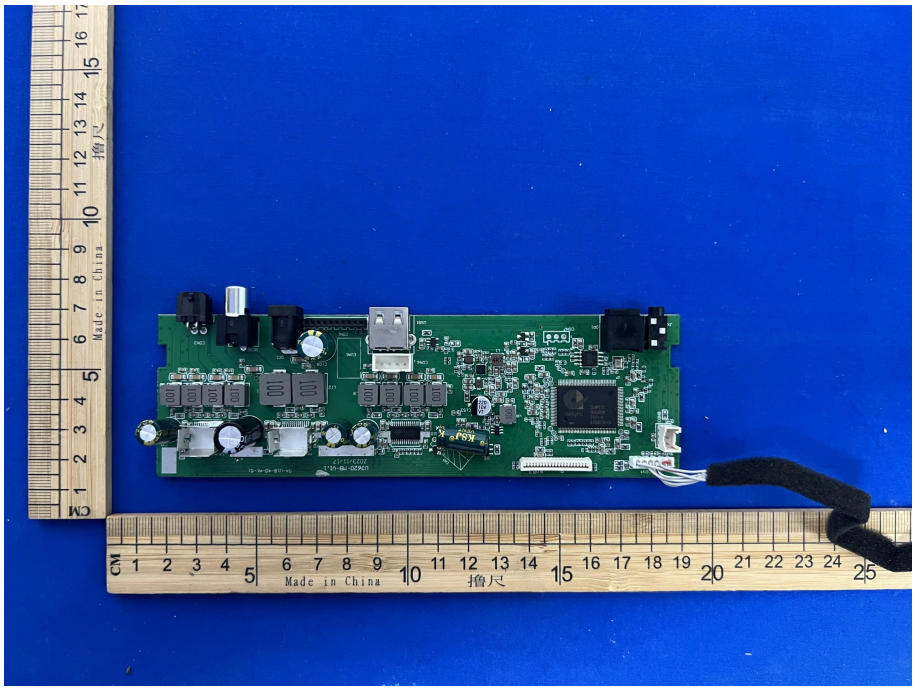








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Made in China
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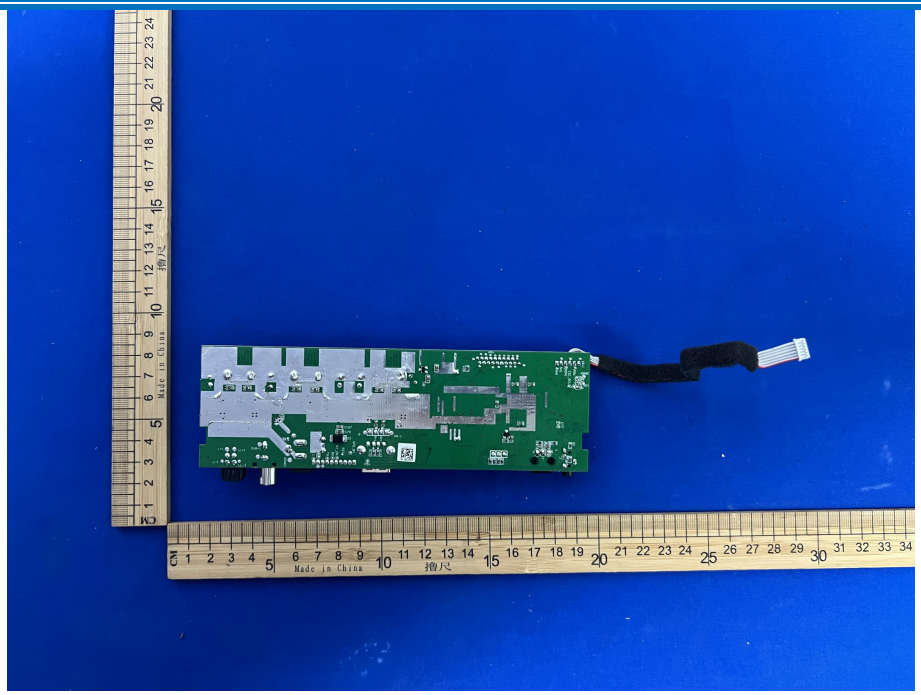

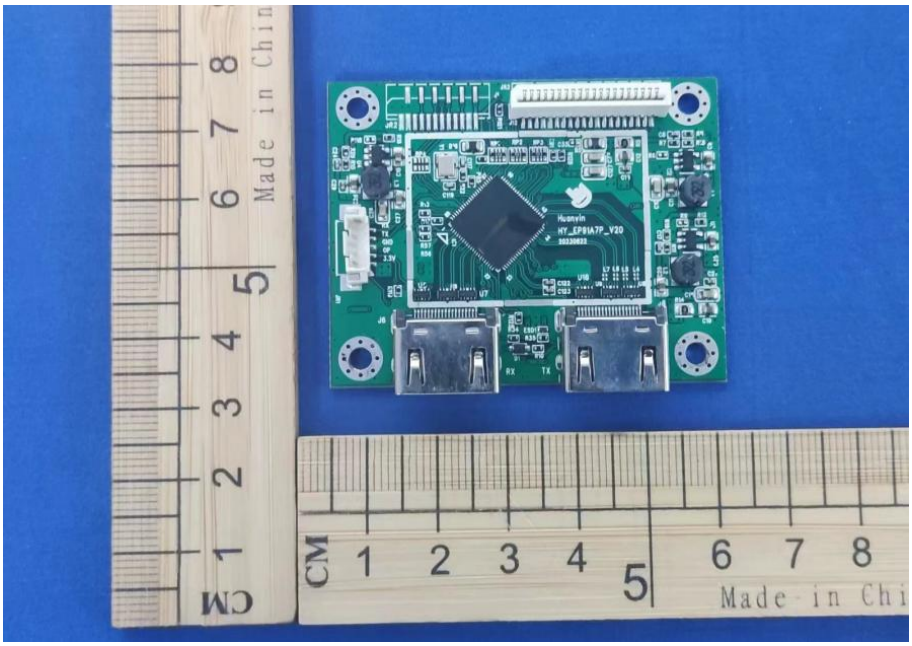
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CM
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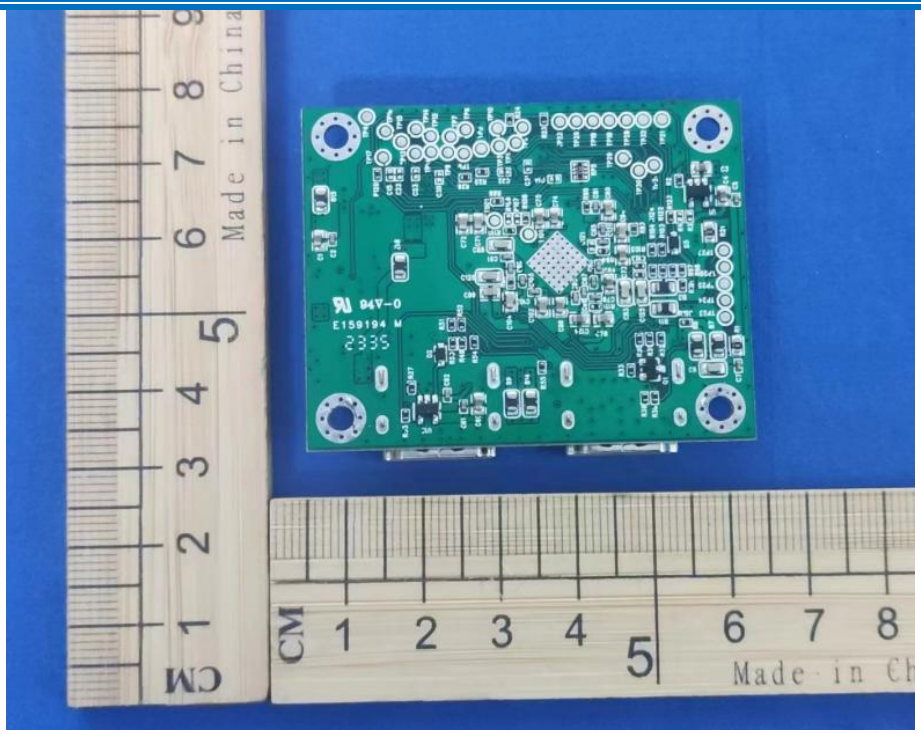
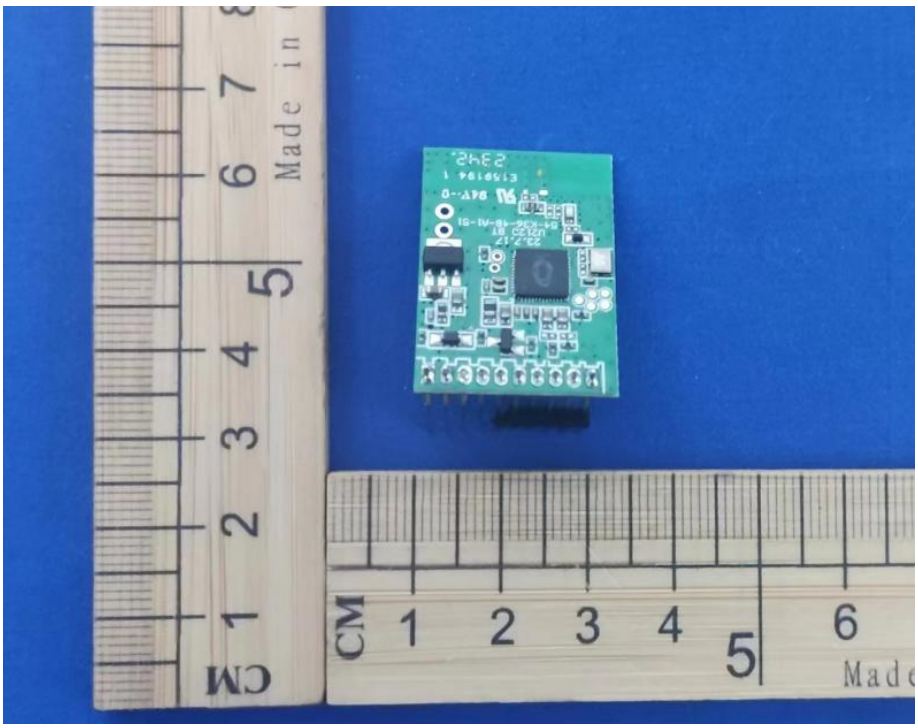
Made in Chi


Made in China
CM
1 2 3 4 5 6 7 8
Made in Ch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CM
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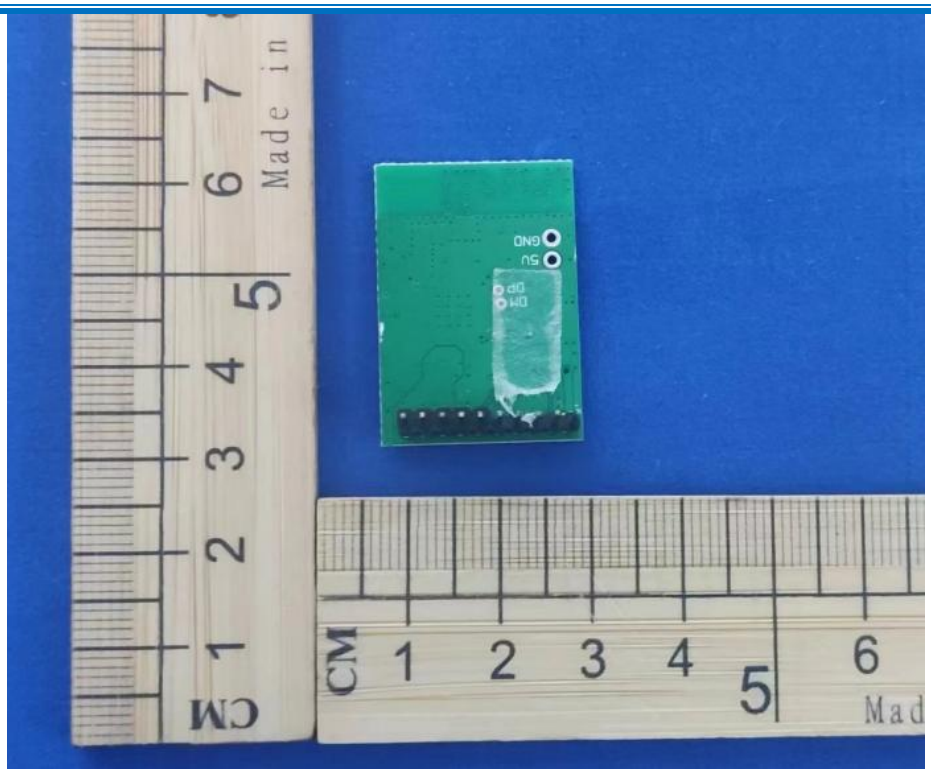
Made


GND
5V
DP
DM
Made in
CM
1 2 3 4 5 6

AC ADAPTER
MODEL:SMS-00240300-S77
INPUT:100-240V~
50/60Hz 1.7A
OUTPUT:24.0V⎓3.0A 72.0W
E214960
I.T.E
SELV
Guangdong Shanmuson Technology Co., Ltd.
MADE IN CHINA R2342

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*** END OF REPORT ***