FCC Part 15B Test Report

Application No.	:	TB11081419
Applicant	:	Ingtron Enterprise Co., Ltd.
Equipment Under Test (EUT)		
EUT Name	:	PC CASE+DC Power Board
Model No.	:	IT201
Serial No.	:	IT2XX IT3XX (XX=0~9)
Brand Name	:	No supplied by client
Receipt Date	:	2011-08-08
Test Date	:	2011-08-09 to 2011-08-11
Issue Date	:	2011-08-15
Standards	:	FCC Part 15:2009 Subpart B
Conclusions	:	**PASS**

In the configuration tested, the EUT complied with the standards specified above, The EUT technically complies with the FCC requirements.

Test/Witness Engineer : Ray Lai

Approved & Authorized : Justin zheng

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

10/F., A Block, Jiada R & D Bldg., No.5 Songpingshan Road, Science & Technology Park,
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Contents

1. General Information

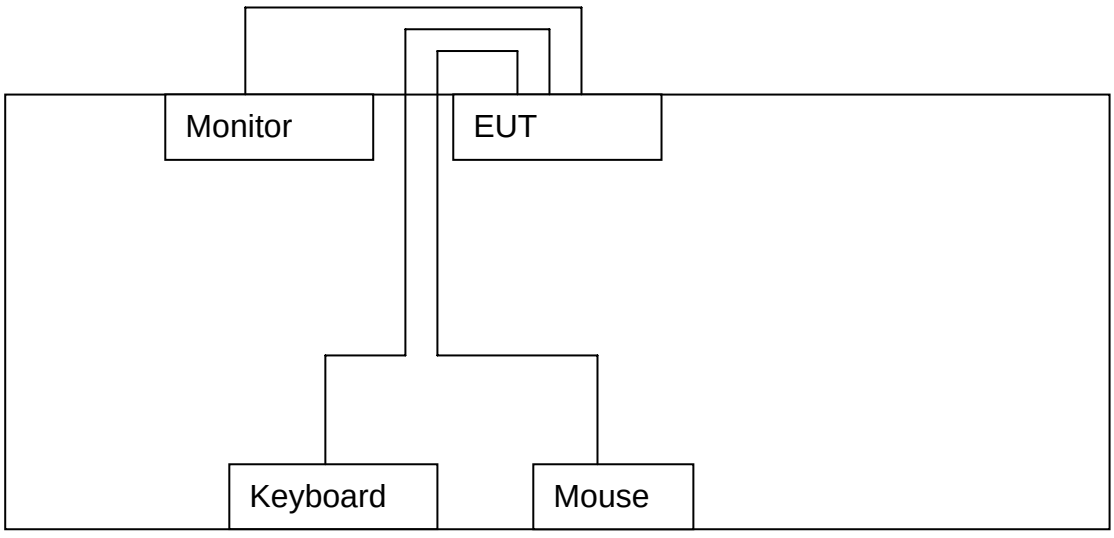
1.1 Client Information

Applicant	:	Ingtron Enterprise Co., Ltd.
Address	:	No.2, Lane 6, Xinwei Village, TUqiao Administrative District, Qingxi Town, Dongguan City, Guangdong, China
Manufacturer	:	Ingtron Enterprise Co., Ltd.
Address	:	No.2, Lane 6, Xinwei Village, TUqiao Administrative District, Qingxi Town, Dongguan City, Guangdong, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	PC CASE+DC Power Board
Model No.	:	IT201
Serial No.	:	IT2XX IT3XX (XX=0~9)
Brand Name	:	No supplied by client
Power Supply	:	Input: AC 100~240V 50/60Hz Output: DC12V 5A
Remark: All above models are identical in schematic, structure and critical components except for different model number, color and different enclosure, therefore, FCC testing was performed with IT201 only.		

1.3 Block Diagram Showing The Configuration of System Tested



1.4 Description of Support Units

Name	Model	S/N	Manufacturer	Used " √ "
LCD Monitor	E170Sc	----	DELL	√
Keyboard	L100	U01C	DELL	√
Mouse	M-UARDEL7	----	DELL	√

1.5 Test standards

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.107, 15.109 rules.
Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.6 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 10/F., A Block, Jiada R & D Bldg., No.5 Songpingshan Road, Science & Technology Park, Nanshan District, Shenzhen, China. At the time of testing, the following bodies accredited the Laboratory:

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

Jun. 04, 2010 certificated by TUV Rhineland, Shenzhen (Audit Report:17015407-001). The certificate is valid until the next scheduled inspection or up to 18 months, at the discretion of TUV Rhineland.

1.7 Equipment Used Test

1.7.1 Test Equipment Used to Measure Conducted Emission

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC001	EMI Test Receiver	Rohde & Schwarz	ESCS30	Jan.20, 2011	1 Year
TB-EMC002	AMN	Rohde & Schwarz	ENV216	Jan.20, 2011	1 Year
TB-EMC003	AMN	SCHWARZBECK	NNBL 8226-2	Jan.20, 2011	1 Year

1.7.2 Test Equipment Used to Measure Radiated Emission

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC004	EMI Test Receiver	Rohde & Schwarz	ESI26	Jan.20, 2011	1 Year
TB-EMC005	Bilog Antenna	SCHWARZBECK	VULB9163	Jan.20, 2011	1 Year
TB-EMC006	Positioning Controller	C&C	CC-C-1F	N/A	N/A

2. Test Summary

Test Items	Test Requirement	Test Method	Result
Conducted Emission	FCC Part 15:2009 Subpart B	ANSI C63.4	Pass
Radiated Emission	FCC Part 15:2009 Subpart B	ANSI C63.4	Pass
Remark: N/A is an abbreviation for Not Applicable.			

3. Conducted Emission Test

3.1 Test Standard and Limit

3.1.1Test Standard

FCC Part 15 B: 2009

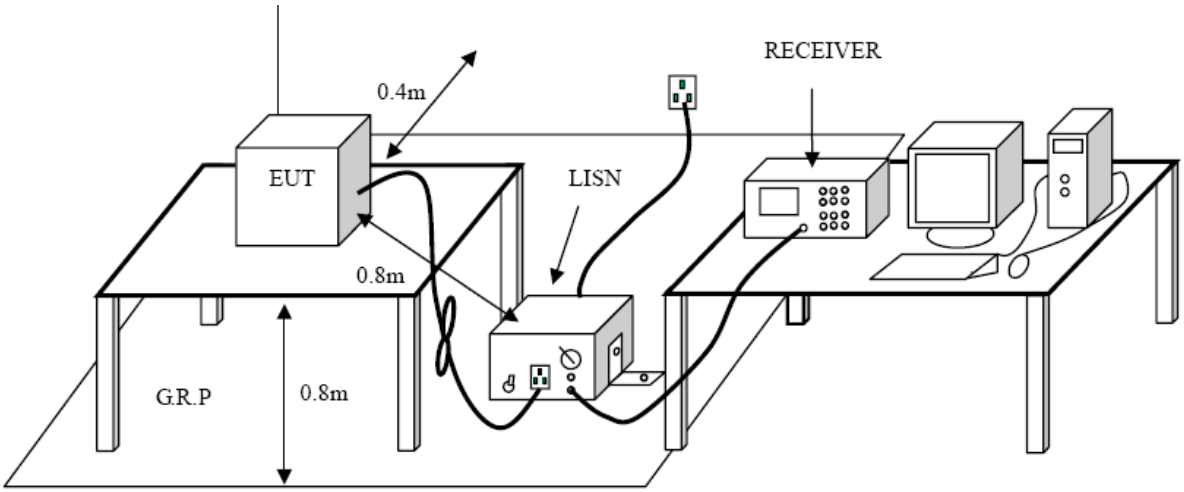
3.1.2 Test Limit

Conducted Emission Test Limit (Class B)

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

*decreasing linearly with logarithm of the frequency

3.2 Test Setup



3.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

3.4 Test Data

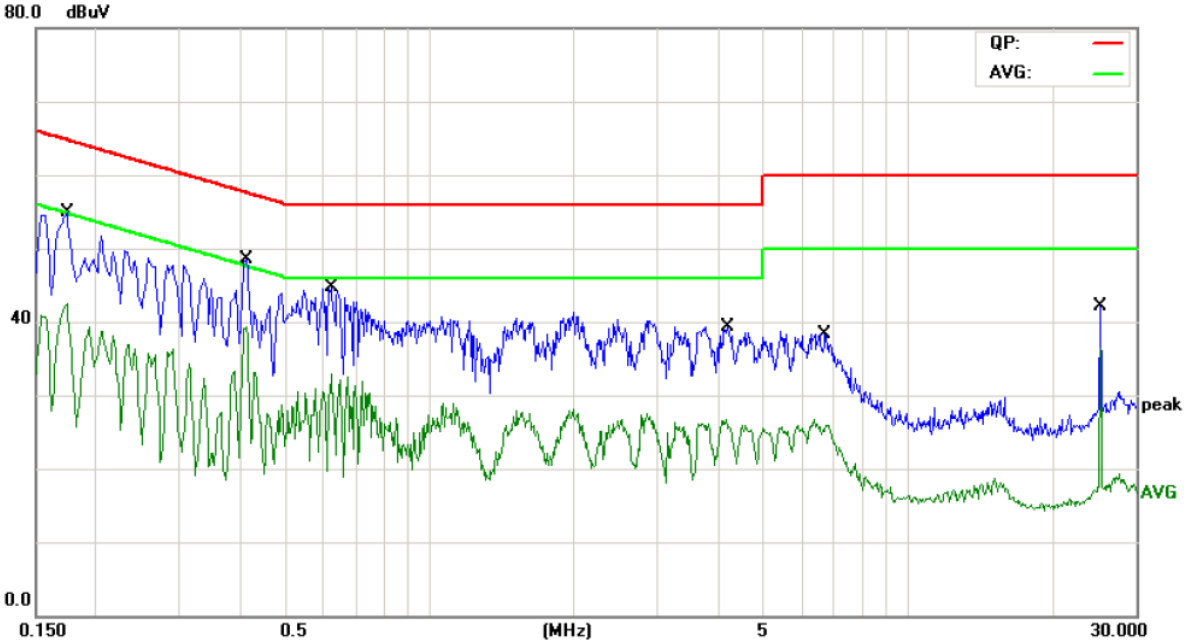
Temperature	:	25 ℃
Relative Humidity	:	48 %
Pressure	:	1010 hPa
Test Power	:	AC 120V/60Hz

3.4 Test Data

Please see the following pages.

Operating Condition: Normal

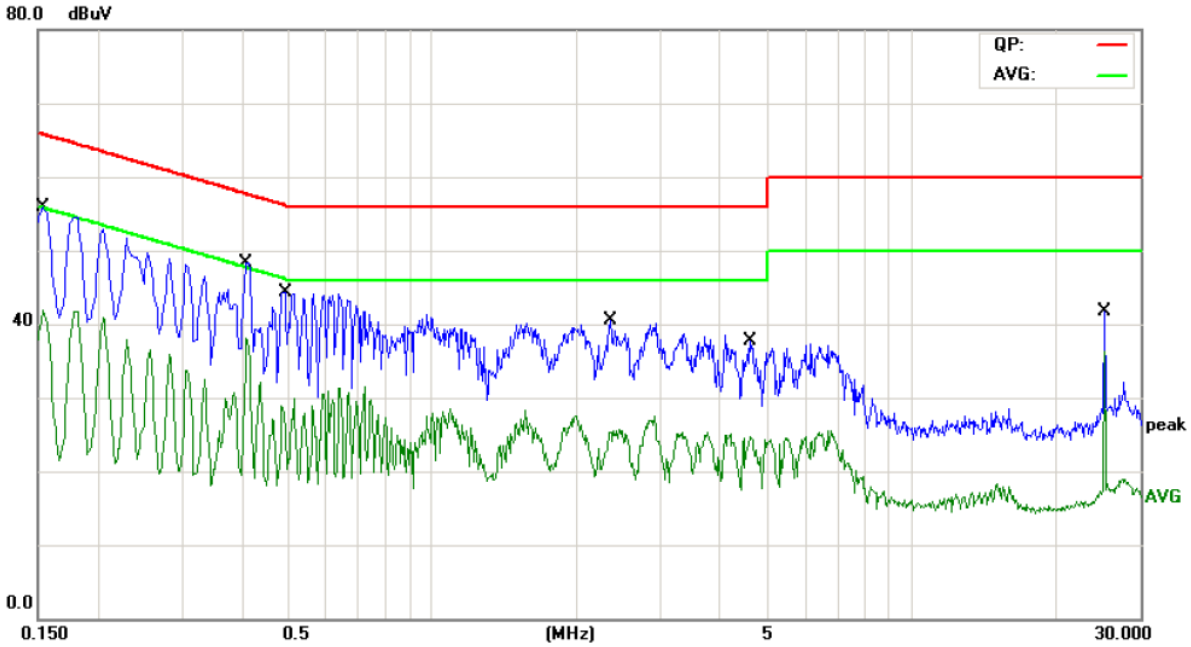
Test Specification: Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1740	26.32	21.04	47.36	64.76	-17.40	QP	
2	*	0.4140	24.55	21.07	45.62	57.57	-11.95	QP	
3		0.6220	19.90	21.06	40.96	56.00	-15.04	QP	
4		4.1898	18.87	20.51	39.38	56.00	-16.62	QP	
5		6.7019	18.21	20.19	38.40	60.00	-21.60	QP	
6		25.3140	22.23	19.86	42.09	60.00	-17.91	QP	

Operating Condition: Normal

Test Specification: Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1539	32.53	21.29	53.82	65.78	-11.96	QP	
2	*	0.4100	24.71	21.11	45.82	57.65	-11.83	QP	
3		0.4940	16.84	21.12	37.96	56.10	-18.14	QP	
4		2.3460	19.75	20.78	40.53	56.00	-15.47	QP	
5		4.6179	17.30	20.43	37.73	56.00	-18.27	QP	
6		25.3140	21.77	19.91	41.68	60.00	-18.32	QP	

4. Radiated Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard

FCC Part 15 B: 2009

4.1.2 Test Limit

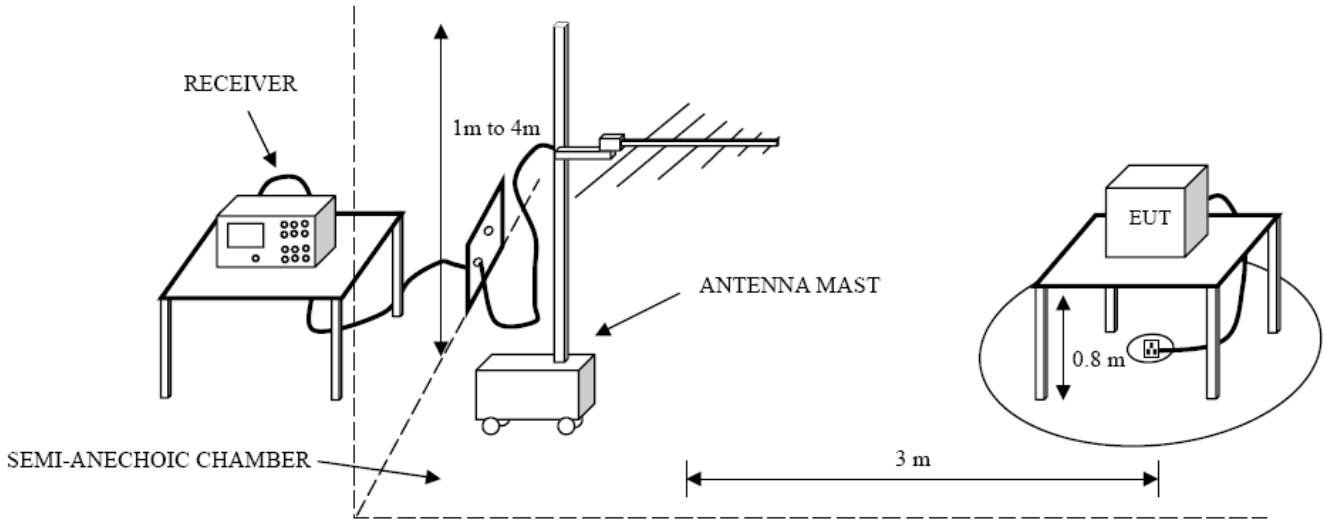
Radiated Emission Test Limit (Class B)

Frequency MHz	Field Strengths Limits dB(μV/m)
30 ~ 88	40.0
88 ~ 216	43.5
216 ~ 960	46.0
960 ~ 1000	54.0

* The lower limit shall apply at the transition frequency.

* The test distance is 3m.

4.2 Test Setup



4.3 Test Procedure

The EUT was placed on the top of a rotating table which is 0.8 meters above the ground. EUT is set 3.0 meters away from the receiving antenna that mounted on a antenna tower. The table was rotated 360 degrees to determine the position of the highest radiation, the antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

Measurements shall be made with a quasi-peak measuring receiver in the frequency range 30MHz to 1000MHz. If the Peak Mode measured value compliance with and lower than quasi-peak mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

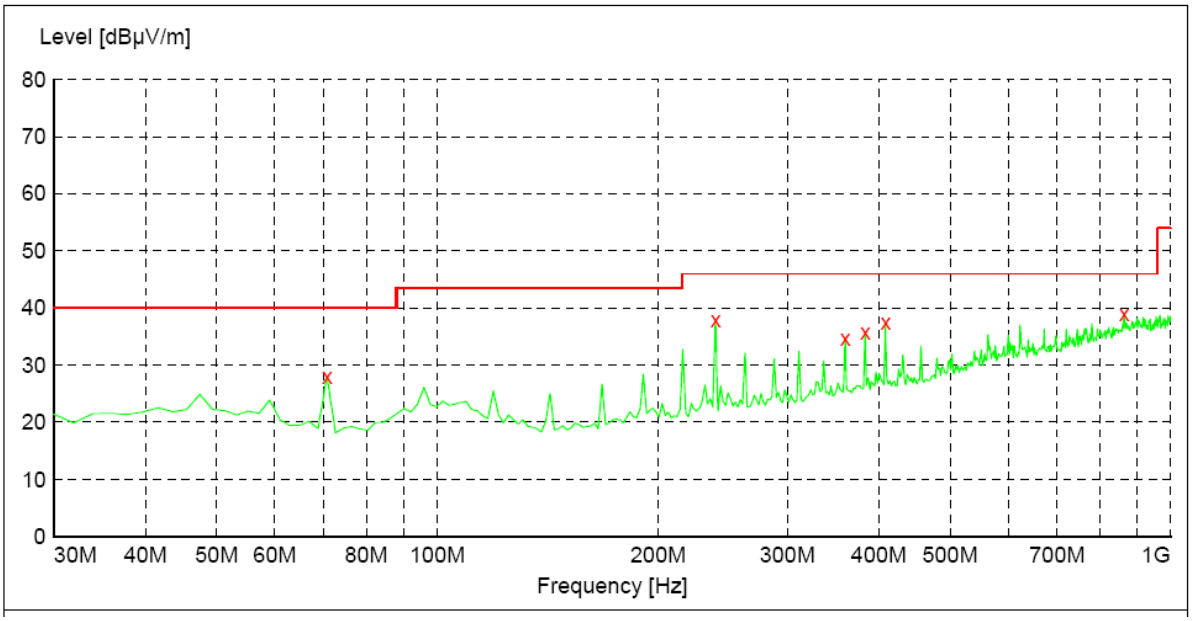
4.4 Test Condition

Temperature	:	23 ℃
Relative Humidity	:	53 %
Pressure	:	1010 hPa
Test Power	:	AC 120V/60Hz

4.5 Test Data

Operating Condition: Normal Mode

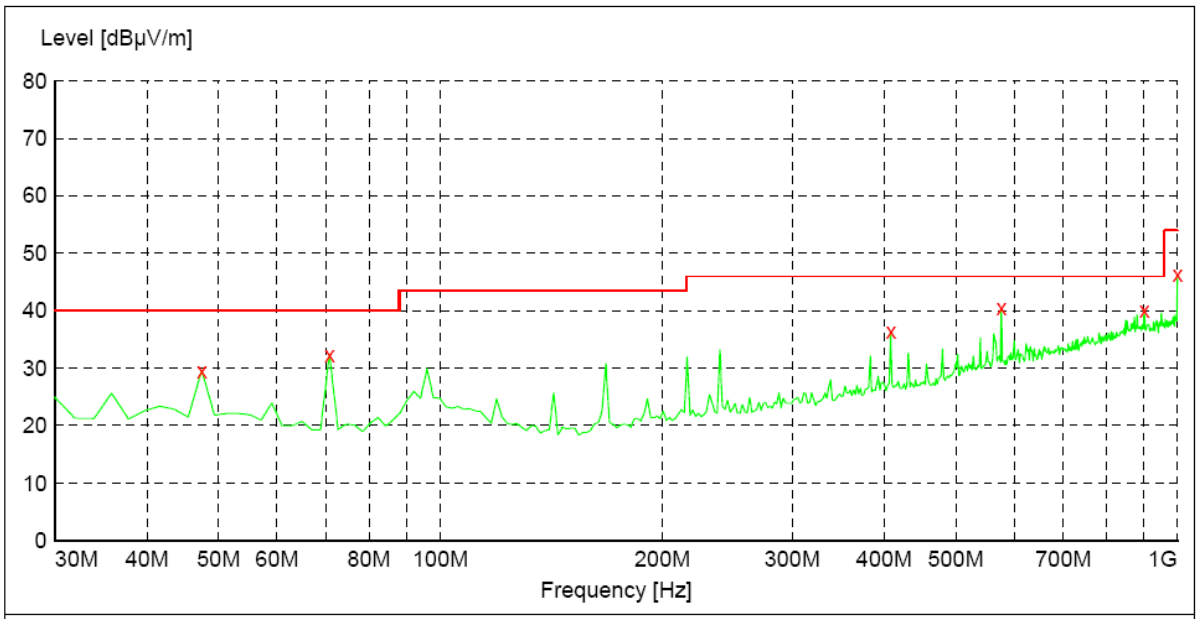
Test Specification: Horizontal



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
70.740000	28.00	12.4	40.0	12.0	---	100.0	0.00	HORIZONTAL
239.520000	38.00	17.1	46.0	8.0	---	100.0	0.00	HORIZONTAL
359.800000	34.80	20.6	46.0	11.2	---	100.0	0.00	HORIZONTAL
383.080000	35.80	21.0	46.0	10.2	---	100.0	0.00	HORIZONTAL
408.300000	37.50	21.7	46.0	8.5	---	100.0	0.00	HORIZONTAL
864.200000	38.90	30.6	46.0	7.1	---	100.0	0.00	HORIZONTAL

Operating Condition: Normal Mode

Test Specification: Vertical



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	29.60	15.8	40.0	10.4	---	100.0	0.00	VERTICAL
70.740000	32.40	12.4	40.0	7.6	---	100.0	0.00	VERTICAL
408.300000	36.40	21.7	46.0	9.6	---	100.0	0.00	VERTICAL
577.080000	40.40	25.9	46.0	5.6	---	100.0	0.00	VERTICAL
901.060000	40.10	31.2	46.0	5.9	---	100.0	0.00	VERTICAL
1000.000000	46.40	32.3	54.0	7.6	---	100.0	0.00	VERTICAL

5. Photographs - Constructional Details

Photo 1 Appearance of EUT

Photo 2 Appearance of EUT

Photo 3 Inside of EUT

Photo 4 Inside of EUT

Photo 5 Inside of EUT

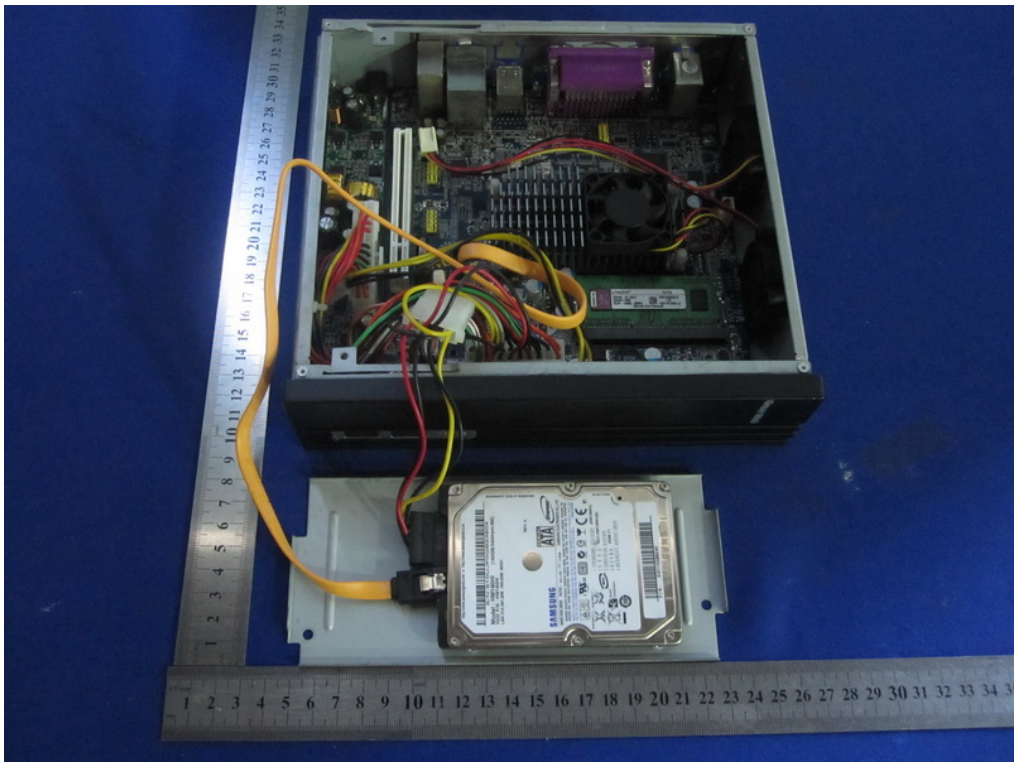


Photo 6 Appearance of PCB

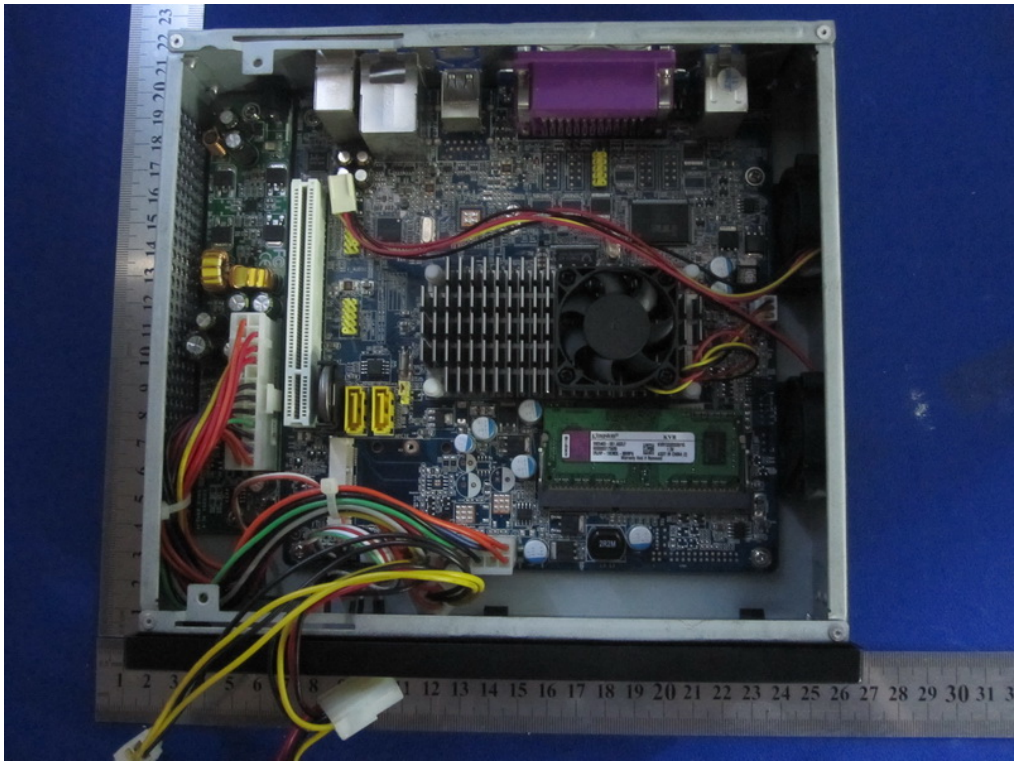


Photo 7 Appearance of PCB

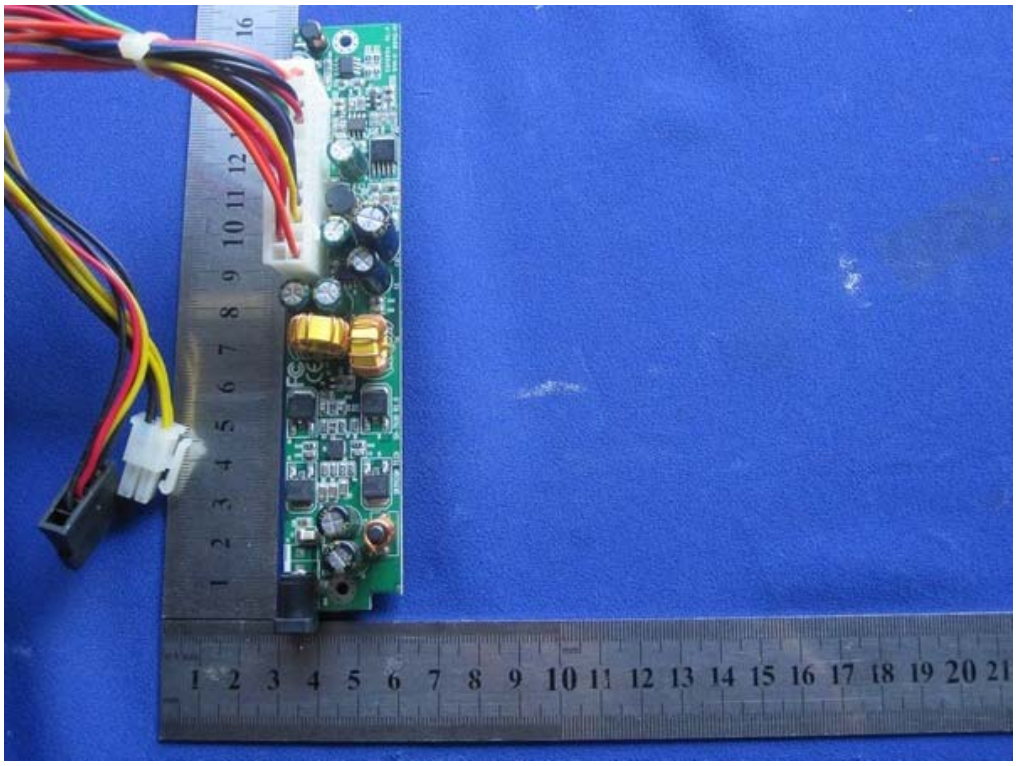


Photo 8 Appearance of PCB