SPORTON LAB.

Certificate No: FD343044

CERTIFICATE OF COMPLIANCE

Authorized under Declaration of Conformity
according to
47 CFR,Part 2 and Part 15 of the FCC Rules

Equipment : **IPC Bare Bone System**
Model No. : **JNF9JXX-YYYY (X & Y Stands for "0~9", "A~Z"), HBJC1WWF9JX-YYYY-Z (W, X, Y & Z Stands for "0~9", "A~Z")**
Applicant : **Jetway Information Co., Ltd.**
9F., No. 207, Sec. 3, Beixin Rd., Xindian Dist.,
New Taipei City 231, Taiwan (R.O.C.)

SPORTON LAB.

I HEREBY CERTIFY THAT:

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN **ANSI C63.4 - 2003** AND THE ENERGY EMITTED BY THIS EQUIPMENT WAS ***PASSED*** **FCC Part 15 Subpart B** in BOTH RADIATED AND CONDUCTED EMISSIONS **Class B** LIMITS.

THE TESTING WAS COMPLETED ON **May. 20, 2013** AT **SPORTON INTERNATIONAL INC.** LAB.

TAF
Testing Laboratory
1190

Jack Deng
Engineering Manager

Testing Laboratory
1190

FCC TEST REPORT

Authorized under **D**eclaration **o**f **C**onformity

according to

47 CFR FCC Rules and Regulations Part 15 Subpart B,

Class B Digital Device

Equipment	:	IPC Bare Bone System
Model No.	:	JNF9JXX-YYYY (X & Y Stands for "0~9", "A~Z"), HBJC1WWF9JX-YYYY-Z (W, X, Y & Z Stands for "0~9", "A~Z")
Filing Type	:	Declaration of Conformity
Applicant	:	**Jetway Information Co., Ltd.** 9F., No. 207, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)

Statement

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by TAF or any agency of U.S. government.

SPORTON International Inc.

6F, No. 106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

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History of this test report

Report No.	Version	Issue Date	Description
FD343044	Rev.01	May. 30, 2013	Initial issue of report

Certificate No. : FD343044

CERTIFICATE OF COMPLIANCE

Authorized under **D**eclaration **o**f **C**onformity

according to

47 CFR FCC Rules and Regulations Part 15 Subpart B,

Class B Digital Device

Testing Laboratory 1190

Equipment : IPC Bare Bone System

Model No. : JNF9JXX-YYYY (X & Y Stands for "0~9", "A~Z"), HBJC1WWF9JX-YYYY-Z (W, X, Y & Z Stands for "0~9", "A~Z")

Applicant : **Jetway Information Co., Ltd.**
9F., No. 207, Sec. 3, Beixin Rd., Xindian Dist.,
New Taipei City 231, Taiwan (R.O.C.)

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 2003** and the energy emitted by this equipment was ***passed*** **FCC Part 15 Subpart B** in both radiated and conducted emission **Class B** limits.

The test was carried out on ***May. 20, 2013*** at **SPORTON International Inc.** LAB.

Jack Deng
Engineering Manager

SPORTON International Inc.

6F, No. 106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

1. General Description of Equipment under Test

1.1. Applicant

Jetway Information Co., Ltd.

9F., No. 207, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)

1.2. Manufacturer

Same as 1.1

1.3. Basic Description of Equipment under Test

Equipment	:	IPC Bare Bone System
Model No.	:	JNF9JXX-YYYY (X & Y Stands for "0~9", "A~Z"), HBJC1WWF9JX-YYYY-Z (W, X, Y & Z Stands for "0~9", "A~Z")
Associated with interface cables		
RJ45 Cable ×2	:	Non-Shielded, 20 m
Data Cable Type	:	Please see section 2.2 of this test report for details
Power Supply Type	:	From Adapter
AC Power Cord	:	Non-Shielded, 1.8 m, 3 pin
DC Power Cable	:	B-Shielded, 1.8 m

1.4. Feature of Equipment under Test

Please refer to user manual.

2. Test Configuration of Equipment under Test

2.1. Test Manner

a. During testing, the personal computer and equipment positions were varied according to ANSI C63.4-2003 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.

b. The equipment under test were performed the following test modes:

Test Items	Function Type
AC Conducted Emission	Mode 1. R/W, DVI, D-SUB 1920*1080 60Hz, EARPHONE, LAN: 1Gbps Mode 2. R/W, HDMI: 1920*1080 60Hz, Speaker, LAN: 1Gbp Mode 3. R/W, DVI, D-SUB 1680*1050 60Hz, EARPHONE, LAN:100Mbps Cause “mode 1” generated the worst test result; it was reported as final data.
Radiated Emissions	Mode 1. R/W, DVI, D-SUB 1920*1080 60Hz, EARPHONE, LAN: 1Gbps Mode 2. R/W, HDMI: 1920*1080 60Hz, Speaker, LAN: 1Gbp Mode 3. R/W, DVI, D-SUB 1680*1050 60Hz, EARPHONE, LAN:100Mbps **< below 1GHz >** cause “mode 1” generated the worst test result; it was reported as final data. **< above 1GHz >** cause “mode 2” is highest frequency of the internal sources of the EUT; it was reported as final data.

c. Frequency range investigated: Conduction 150 kHz to 30 MHz, Radiation 30 MHz to 15,000 MHz.

2.2. Description of Test System

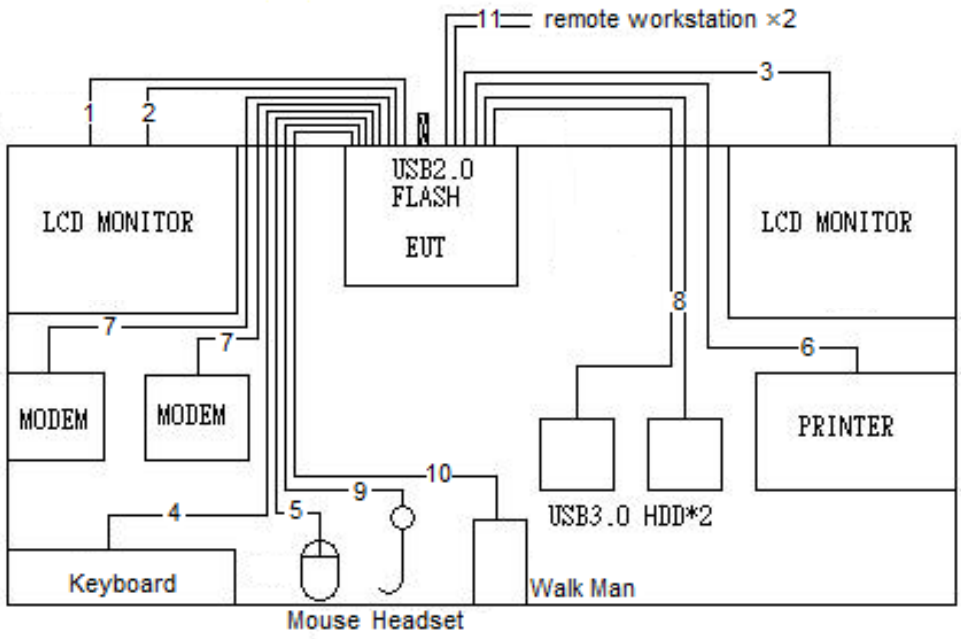
<Conducted and Radiated below 1GHz>

No.	Peripheral	Manufacturer	Model Number	FCC ID	Cable / Spec. Description	Placed
1	LCD Monitor	DELL	2408WFPb	DoC	D-SUB Cable, D-Shielded, 1.8m HDMI Cable, D-Shielded, 1.8m	Local
2	LCD Monitor	DELL	U2410	DoC	DVI Cable, D-Shielded, 1.8m	Local
3	Keyboard	DELL	SK-8175	DoC	USB Cable, AL-F-Shielded, 1.8m	Local
4	Mouse	DELL	MOC5UO	DoC	USB Cable, AL-F-Shielded, 1.8m	Local
5	Printer	XEROX	PHASER3121	DoC	USB Cable, AL-F-Shielded, 1.8m	Local
6	Modem X2	ACEEX	DM1414	IFAXDM1414	RS-232 Cable, D-Shielded, 1.15m	Local
7	USB 2.0 Flash Disk	Transcend	JetFlash V85	DoC	N/A	Local
8	USB 3.0 HDD X2	PQI	H566	DoC	USB Cable, D-Shielded, 1.0m	Local
9	Headset	i-Acon	HOH-323-BK	N/A	Audio Cable, Non-Shielded, 2.0m	Local
10	Walk Man	KOKA	KW-246	N/A	Audio Cable, Non-Shielded, 1.7m	Local
11	Personal Computer X2	DELL	DCTA	DoC	N/A	Remote
12	LCD Monitor X2	DELL	U2410	DoC	D-SUB Cable, D-Shielded, 1.8m	Remote
13	Keyboard X2	DELL	SK-8175	DoC	USB Cable, AL-F-Shielded, 1.8m	Remote
14	Mouse X2	DELL	MOC5UO	DoC	USB Cable, AL-F-Shielded, 1.8m	Remote

<Radiated above 1GHz>

No.	Peripheral	Manufacturer	Model Number	FCC ID	Cable / Spec. Description	Placed
1	LCD Monitor	DELL	2408WFPb	DoC	D-SUB Cable, D-Shielded, 1.8m HDMI Cable, D-Shielded, 1.5m	Local
2	LCD Monitor	DELL	U2410	DoC	DVI Cable, D-Shielded, 1.8m	Local
3	Keyboard	DELL	SK-8175	DoC	USB Cable, AL-F-Shielded, 1.8m	Local
4	Mouse	DELL	MOC5UO	DoC	USB Cable, AL-F-Shielded, 1.8m	Local
5	Printer	EPSON	STYLUS C61	DoC	USB Cable, AL-F-Shielded, 1.8m	Local
6	Modem X2	ACEEX	DM1414	IFAXDM1414	RS-232 Cable, D-Shielded, 1.15m	Local
7	USB 2.0 Flash Disk	Transcend	JetFlash V85	DoC	N/A	Local
8	USB 3.0 HDD X2	PQI	H566	DoC	USB Cable, D-Shielded, 1.0m	Local
9	Headset	i-Acon	HOH-323-BK	N/A	Audio Cable, Non-Shielded, 2.0m	Local
10	Walk Man	AIWA	HS-JS165	N/A	Audio Cable, Non-Shielded, 1.7m	Local
11	Personal Computer X2	DELL	DCTA	DoC	N/A	Remote
12	LCD Monitor X2	DELL	U2410	DoC	D-SUB Cable, D-Shielded, 1.8m	Remote
13	Keyboard X2	DELL	SK-8175	DoC	USB Cable, AL-F-Shielded, 1.8m	Remote
14	Mouse X2	DELL	MOC5UO	DoC	USB Cable, AL-F-Shielded, 1.8m	Remote

2.3. Connection Diagram of Test System



1. The D-SUB cable is connected from the EUT to the support unit 1.
2. The HDMI cable is connected from the EUT to the support unit 1.
3. The DVI cable is connected from the EUT to the support unit 2.
4. The USB cable is connected from the EUT to the support unit 3.
5. The USB cable is connected from the EUT to the support unit 4.
6. The USB cable is connected from the EUT to the support unit 5.
7. These RS-232 cables are connected from the EUT to the support unit 6.
8. These USB cables are connected from the EUT to the support unit 8.
9. The Audio cable is connected from the EUT to the support unit 9.
10. The Audio cable is connected from the EUT to the support unit 10.
11. These RJ45 cables are connected from the EUT to the remote workstation.

Note: Above support unit on behalf of the meaning, please refer to section 2.2.

3. Test Software

An executive program, “EMIprogram.exe” under WIN 7, which generates a complete line of continuously repeating "H" pattern was used as the test software.

The program was executed as follows:

a. Turn on the power of all equipment.
b. The EUT reads the test program from the hard disk drive and runs it.
c. The EUT sends "H" pattern to the monitor, and the monitor displays "H" patterns on the screen.
d. The EUT sends "H" messages to the printer, and then the printer prints them on the paper.
e. The EUT sends signal messages to the modem.
f. The EUT sends signal messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
g. Repeat the steps from c to f.

At the same time, the following programs were executed:

- Executed "MYHWIN.exe" to display continuously repeating “ H “ patterns.
- Executed "Media player" to play audio.
- Executed “Ping.exe” to link with the remote workstation to receive and transmit data by RJ45 cable.
- Executed “Winthrax.exe” to read and write data from USB 2.0 Flash Disk.
- Executed "Sound Recorder.exe" to record the audio signal.

4. General Information of Test

4.1. Test Facility

Test Site：SPORTON INTERNATIONAL INC.

Test Site Location : No. 3, Lane 238, Kang Lo Street, Nei Hwu District, Taipei 11424, Taiwan, R.O.C.
TEL : 886-2-2631-4739
FAX : 886-2-2631-9740

Test Site No. : CO01-NH, OS01-NH

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiag, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-318-0055

Test Site No. : 03CH04-HY

4.2. Test Voltage

AC 120V / 60Hz

4.3. Measurement Procedure

ANSI C63.4-2003

4.4. Test in Compliance with

FCC Rules and Regulations Part 15 Subpart B
15.107 Conducted Emission
15.109 Radiated Emission

4.5. Frequency Range Investigated

a. Conducted emission test: from 150 kHz to 30 MHz
b. Radiated emission test: from 30 MHz to 15,000 MHz

4.6. Test Distance

a. The test distance of radiated emission test from antenna to EUT is 10 M (from 30MHz~1000MHz).
b. The test distance of radiated emission test from antenna to EUT is 3 M (from 1GHz~ 9GHz).
c. The test distance of radiated emission test from antenna to EUT is 1 M (from 9GHz~ 15GHz).

5. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meter above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

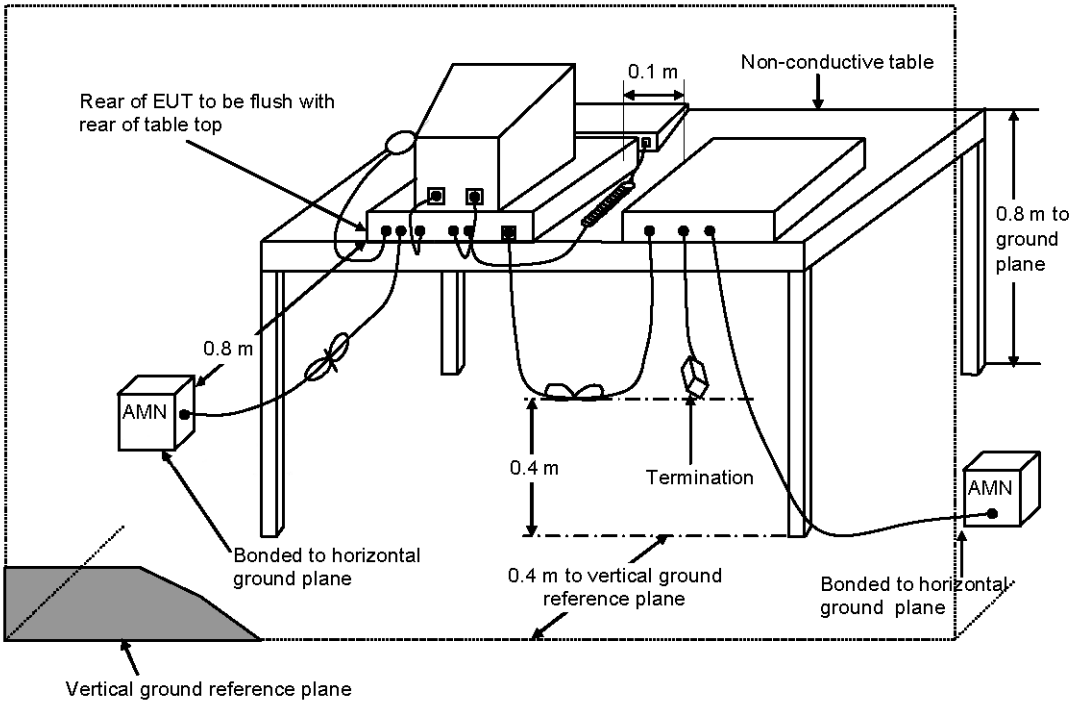
5.1. Description of Major Test Instruments

Test Receiver Parameters	Setting
Test Receiver	R&S ESCS 30
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz
Signal Input	9 kHz - 2.75 GHz

5.2. Test Procedures

a. The EUT was placed on a desk 0.8 meters height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connect to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5.3. Typical Test Setup Layout of Conducted Powerline



a. AMN is 80 cm from the EUT and at least 80 cm from other units and other metal planes.
b. EUT is connected to one artificial mains network (AMN).
c. All other units of a system are powered from a second AMN. A multiple outlet strip can be used for multiple mains cords.
d. Rear of EUT to be flushed with rear of table top.
e. Peripherals shall be placed at a distance of 10 cm from each other and from the controller, except for the monitor which, if this is an acceptable installation practice, shall be placed directly on the top of the controller.
f. If cables, which hang closer than 40 cm to the horizontal metal ground plane, cannot be shortened to appropriate length, the excess shall be folded back and forth forming a bundle 30 cm to 40 cm long.
g. Mains cords and signal cables shall be positioned for their entire lengths, as far as possible, at 40 cm from the vertical reference plane.
h. Cables of hand operated devices, such as keyboards, mice, etc. shall be placed as for normal usage.

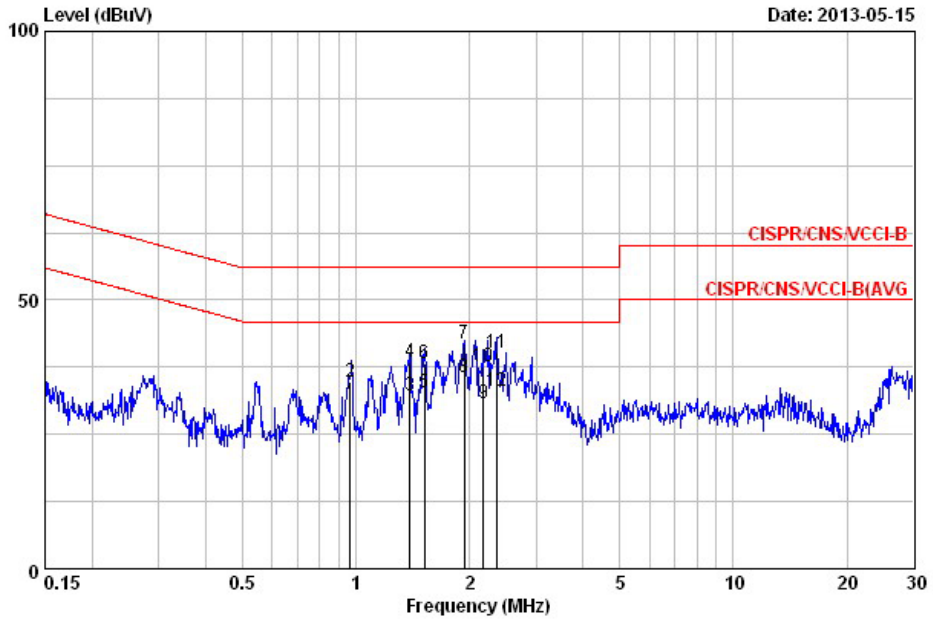
5.4. Test Result of AC Powerline Conducted Emission

Test Mode	Mode 1	Test Site No.	CO01-NH
Test Frequency	0.15 MHz ~ 30 MHz	Test Engineer	Willy
Temperature	24 ℃	Relative Humidity	52 %

Note: 1. Corrected Reading (dBμV) = LISN Factor + Cable Loss + Read Level = Level
2. All emissions not reported here are more than 10 dB below the prescribed limit.

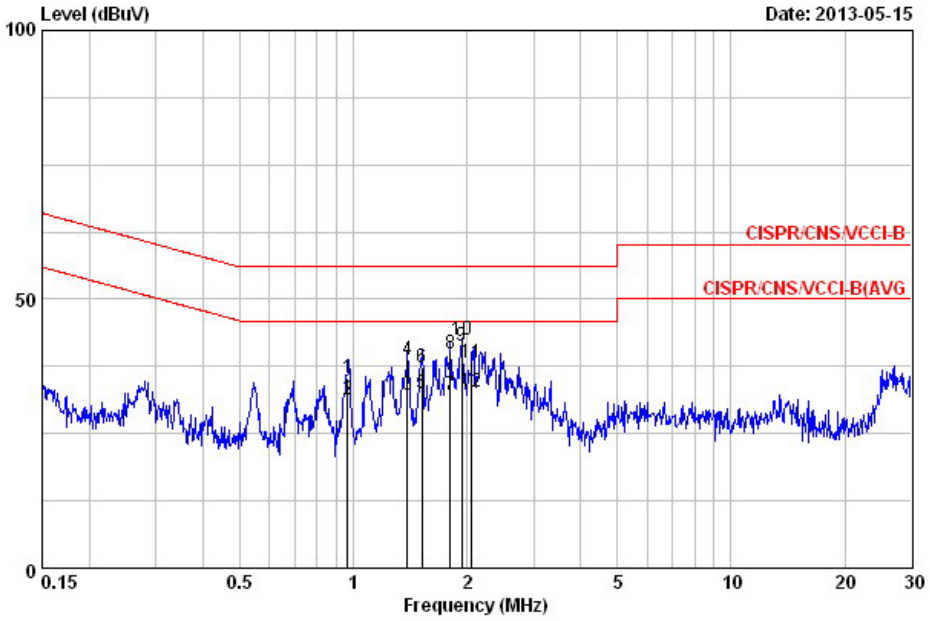
■ **The test was passed at the minimum margin that marked by the frame in the following data**

Line



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.966	30.74	-15.26	46.00	20.45	10.19	0.10	AVERAGE
2	0.966	34.79	-21.21	56.00	24.50	10.19	0.10	QP
3	1.388	32.26	-13.74	46.00	21.91	10.20	0.15	AVERAGE
4	1.388	38.49	-17.51	56.00	28.14	10.20	0.15	QP
5	1.518	32.86	-13.14	46.00	22.50	10.20	0.16	AVERAGE
6	1.518	38.12	-17.88	56.00	27.76	10.20	0.16	QP
7	1.940	41.74	-14.26	56.00	31.34	10.21	0.20	QP
8	1.940	35.66	-10.34	46.00	25.26	10.21	0.20	AVERAGE
9	2.181	30.88	-15.12	46.00	20.47	10.21	0.20	AVERAGE
10	2.181	37.74	-18.26	56.00	27.33	10.21	0.20	QP
11	2.360	40.18	-15.82	56.00	29.77	10.21	0.20	QP
12	2.360	33.15	-12.85	46.00	22.74	10.21	0.20	AVERAGE

Neutral



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.967	35.40	-20.60	56.00	25.15	10.15	0.10	QP
2	0.967	31.23	-14.77	46.00	20.98	10.15	0.10	AVERAGE
3	1.388	32.22	-13.78	46.00	21.91	10.16	0.15	AVERAGE
4	1.388	38.67	-17.33	56.00	28.36	10.16	0.15	QP
5	1.516	32.43	-13.57	46.00	22.10	10.17	0.16	AVERAGE
6	1.516	37.38	-18.62	56.00	27.05	10.17	0.16	QP
7	1.810	32.10	-13.90	46.00	21.74	10.18	0.19	AVERAGE
8	1.810	39.98	-16.02	56.00	29.62	10.18	0.19	QP
9	1.939	41.44	-14.56	56.00	31.07	10.18	0.20	QP
10 @	1.939	42.53	-3.47	46.00	32.16	10.18	0.20	AVERAGE
11	2.062	38.29	-17.71	56.00	27.91	10.18	0.20	QP
12	2.062	32.74	-13.26	46.00	22.36	10.18	0.20	AVERAGE

6. Test of Radiated Emission

Radiated emissions from 30 MHz to 15,000 MHz were measured with a bandwidth of 120 kHz for 30 MHz to 1000 MHz and 1 MHz for above 1GHz according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

6.1. Description of Major Test Instruments

For Below 1GHz

Amplifier Parameters	Setting
Amplifier	HP 8447D
RF Gain	25 dB
Signal Input	0.1 MHz – 1.3 GHz

Spectrum Analyzer Parameters	Setting
Spectrum Analyzer	R&S FSP
Attenuation	10 dB
Start Frequency	30 MHz
Stop Frequency	1000 MHz
Resolution Bandwidth	120 kHz
Signal Input	9 kHz - 7 GHz

Test Receiver Parameters	Setting
Test Receiver	R&S ESCS 30
Resolution Bandwidth	120 kHz
Frequency Band	9 kHz - 3 GHz
Quasi-Peak Detector	ON for Quasi-Peak Mode
	OFF for Peak Mode

For above 1GHz

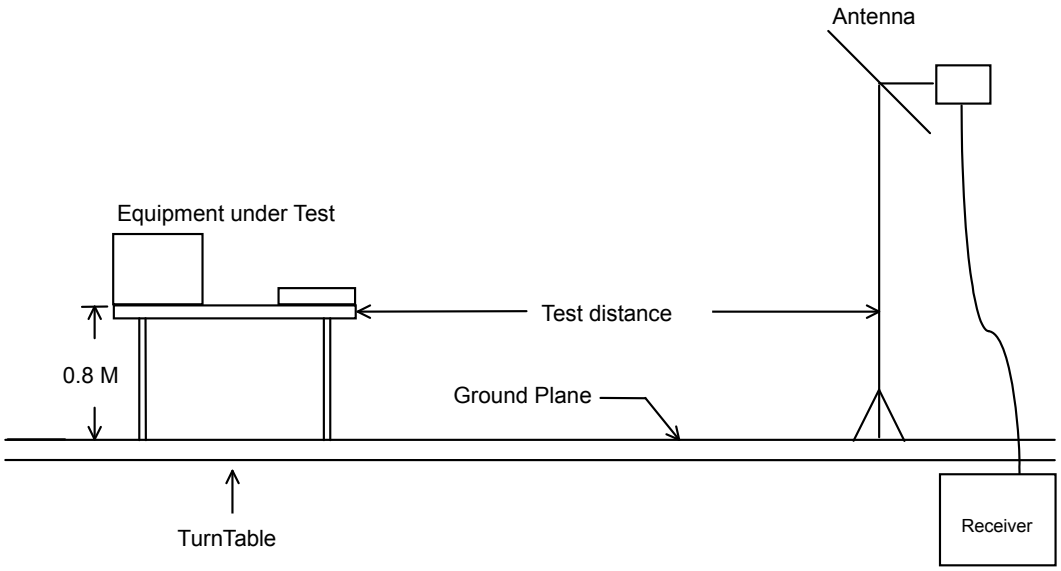
Amplifier Parameters	Setting
Amplifier	AGILENT 8449B
RF Gain	35 dB
Signal Input	1 GHz - 26.5 GHz

Spectrum Analyzer Parameters	Setting
Spectrum Analyzer	R&S FSP40
Attenuation	10 dB
Start Frequency	1 GHz
Stop Frequency	15 GHz
Resolution Bandwidth	1 MHz
Video Bandwidth	3 MHz
Signal Input	9 kHz - 40 GHz

6.2. Test Procedures

a. The EUT was placed on a rotatable table top 0.8 meter above ground.
b. The EUT was set 1m/3m(above 1GHz)/10m(below 1GHz) from the interference-receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
e. 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 turn table (from 0 degree to 360 degrees) to find the maximum reading.
f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
h. The FCC Part 15.109 (g) permit parties seeking to authorize a digital device to choose to demonstrate that the device complies with either the Part 15 standards or the international standards found in Publication 22 of the International Special Committee on Radio Interference (CISPR).
i. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

6.3. Typical Test Setup Layout of Radiated Emission



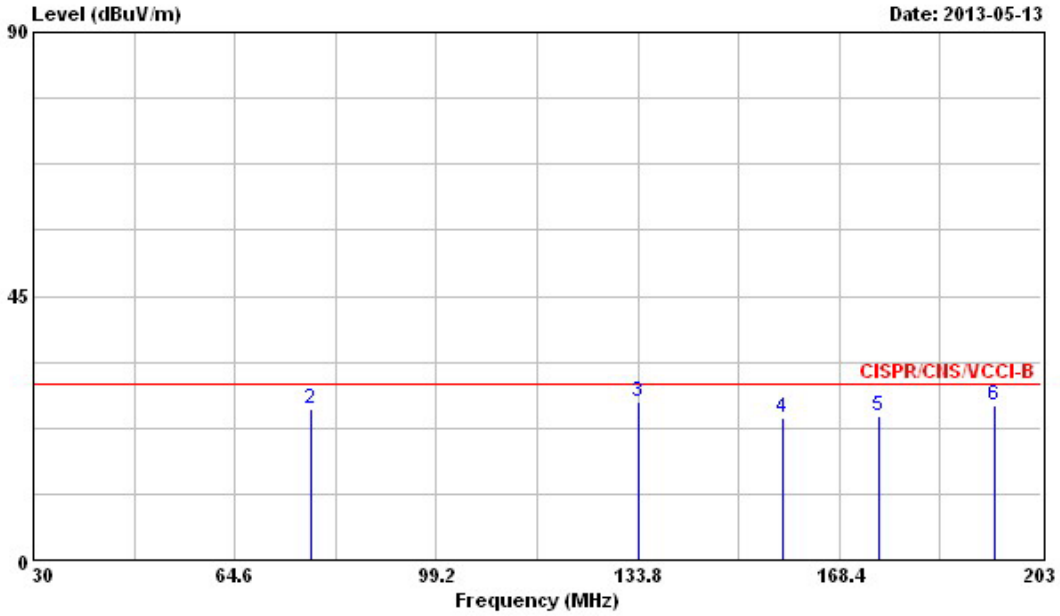
6.4. Test Result of Radiated Emission for Below 1GHz

Test mode	Mode 1	Test Site No.	OS01-NH
Test frequency	30 MHz ~ 1000 MHz	Test Engineer	Louis
Temperature	25 ℃	Relative Humidity	55 %

Note: 1. Emission level (dBμV/m) = 20 log Emission level (μV/m)
2. Corrected Reading : Antenna Factor + Cable Loss + Read Level – Preamp Factor = Level

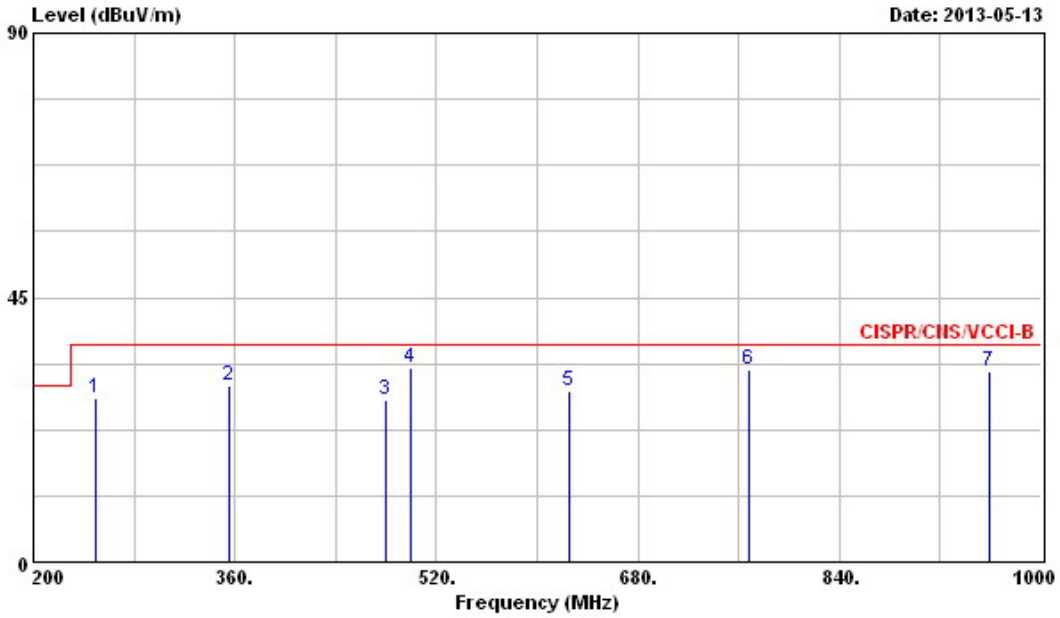
■ **The test was passed at the minimum margin that marked by the frame in the following data**

Vertical



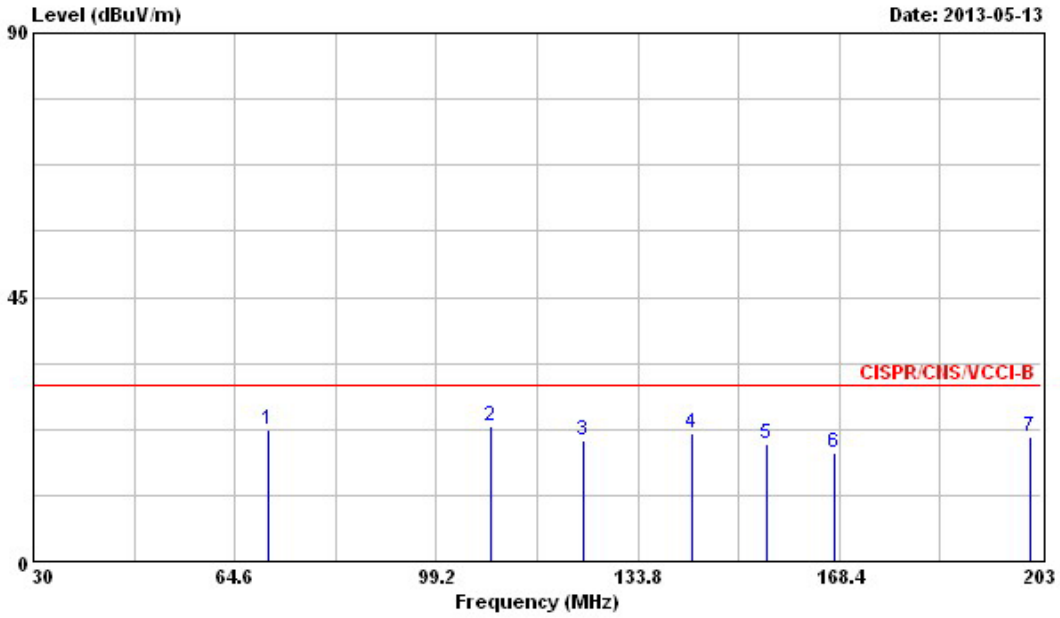
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	30.000	27.45	-2.55	30.00	33.88	20.11	0.83	27.37	QP	100	181
2	77.750	25.79	-4.21	30.00	44.45	7.35	1.25	27.26	QP	---	---
3	133.970	26.87	-3.13	30.00	40.52	11.82	1.60	27.07	Peak	---	---
4	158.710	24.39	-5.61	30.00	38.97	10.63	1.76	26.97	QP	---	---
5	175.150	24.61	-5.39	30.00	40.43	9.25	1.84	26.91	Peak	---	---
6	195.040	26.50	-3.50	30.00	42.52	8.87	1.94	26.83	Peak	---	---

Vertical



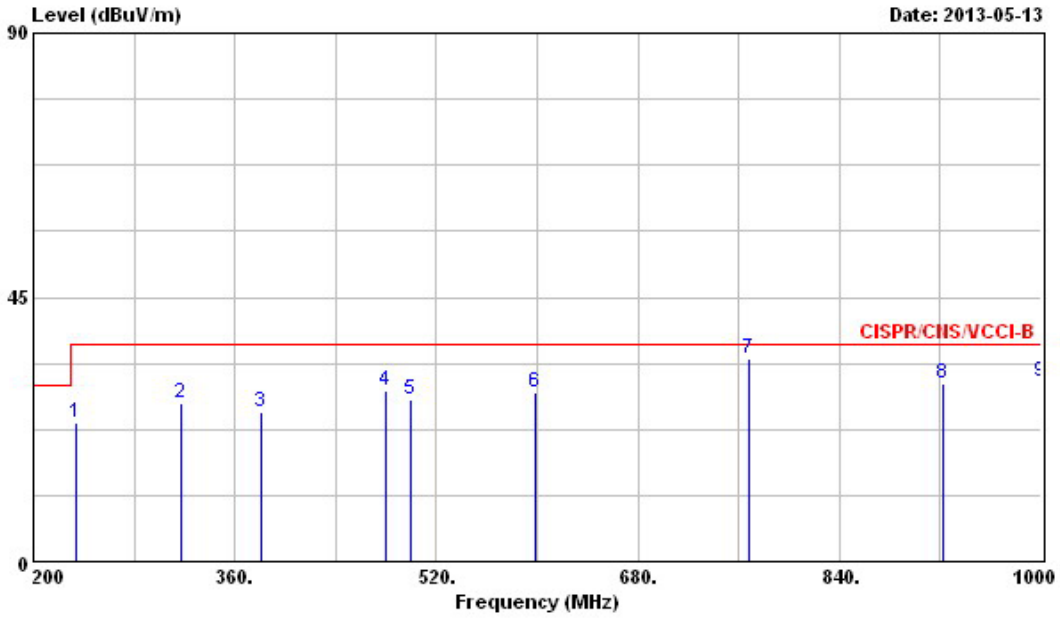
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	249.600	27.98	-9.02	37.00	40.20	12.28	2.17	26.67	Peak	---	---
2	355.200	30.06	-6.94	37.00	39.86	14.59	2.57	26.96	Peak	---	---
3	480.000	27.67	-9.33	37.00	34.50	17.78	3.19	27.80	Peak	---	---
4	499.200	32.91	-4.09	37.00	39.60	17.96	3.26	27.91	Peak	---	---
5	624.800	29.04	-7.96	37.00	33.00	20.25	3.83	28.04	Peak	---	---
6	768.800	32.86	-4.14	37.00	34.72	21.97	4.07	27.90	QP	---	---
7	959.200	32.33	-4.67	37.00	30.08	24.63	4.97	27.35	QP	---	---

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	70.310	22.39	-7.61	30.00	41.55	6.92	1.20	27.28	Peak	---	---
2	108.540	22.95	-7.05	30.00	38.10	10.59	1.43	27.17	Peak	---	---
3	124.460	20.52	-9.48	30.00	34.24	11.84	1.54	27.10	Peak	---	---
4	143.140	21.83	-8.17	30.00	35.91	11.30	1.65	27.03	Peak	---	---
5	155.940	20.06	-9.94	30.00	34.44	10.87	1.73	26.98	Peak	---	---
6	167.540	18.42	-11.58	30.00	33.75	9.80	1.81	26.94	Peak	---	---
7	201.270	21.08	-8.92	30.00	36.98	8.96	1.95	26.81	Peak	---	---

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	234.400	23.65	-13.35	37.00	37.61	10.68	2.07	26.71	Peak	---	---
2	317.600	26.89	-10.11	37.00	37.60	13.39	2.57	26.67	Peak	---	---
3	380.800	25.36	-11.64	37.00	34.50	15.13	2.89	27.16	Peak	---	---
4	480.000	29.21	-7.79	37.00	36.04	17.78	3.19	27.80	Peak	---	---
5	499.200	27.68	-9.32	37.00	34.37	17.96	3.26	27.91	Peak	---	---
6	599.200	28.90	-8.10	37.00	33.29	19.74	3.92	28.05	Peak	---	---
7 @	768.800	34.41	-2.59	37.00	36.27	21.97	4.07	27.90	QP	---	---
8	922.400	30.42	-6.58	37.00	29.47	23.58	4.84	27.47	Peak	---	---
9	1000.000	30.46	-6.54	37.00	28.16	24.74	4.78	27.22	Peak	---	---

6.5. Test Result of Radiated Emission for Above 1GHz

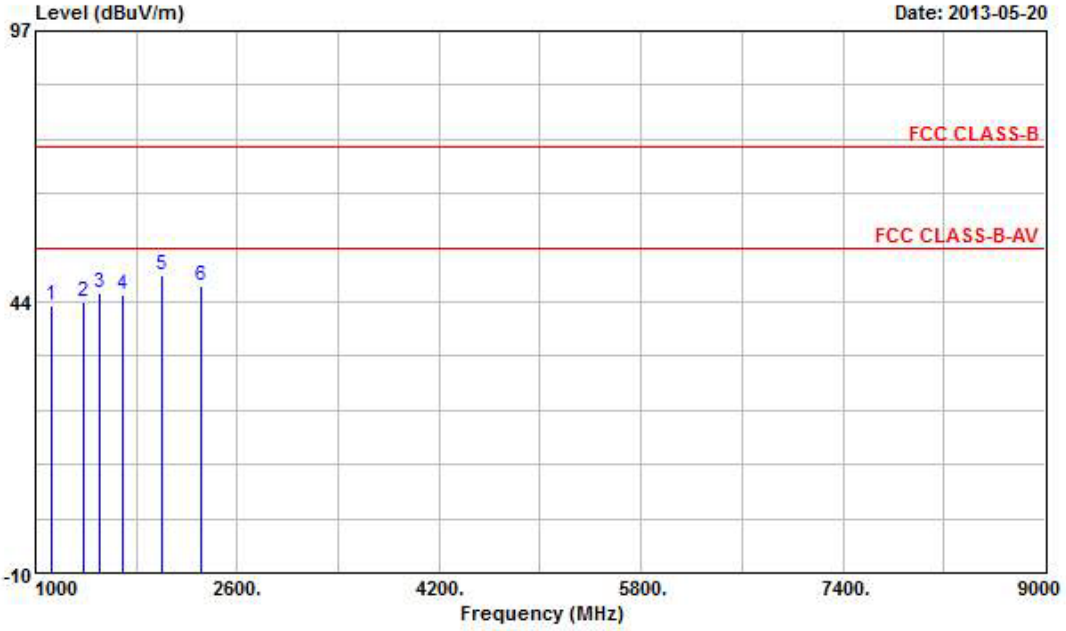
Test mode	Mode 1	Test Site No.	03CH04-HY
Test frequency	1 GHz ~15 GHz	Test Engineer	Kevin
Temperature	25 ℃	Relative Humidity	55 %

Note: 1. Emission level (dBμV/m) = 20 log Emission level (μV/m)

2. Corrected Reading : Antenna Factor + Cable Loss + Read Level – Preamp Factor = Level

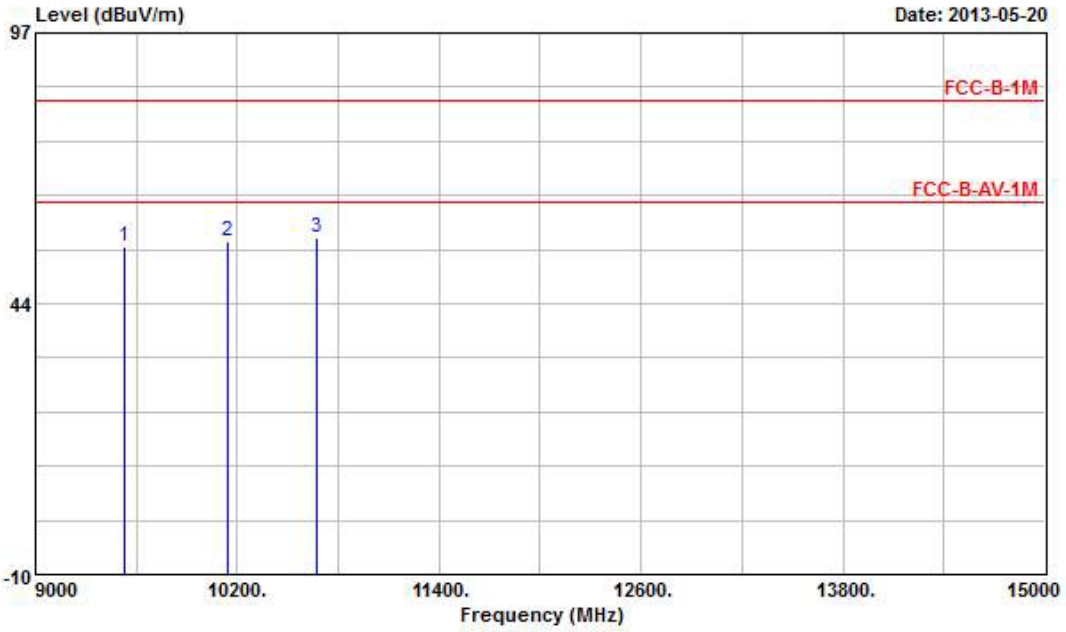
■ **The test was passed at the minimum margin that marked by the frame in the following data**

Vertical



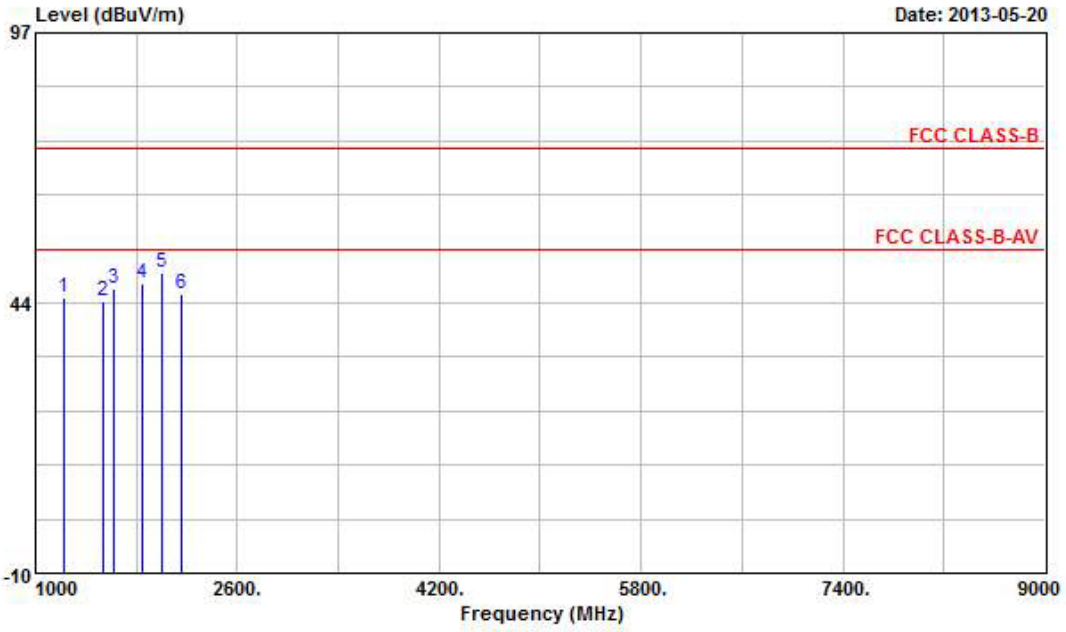
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1134.000	42.78	-31.22	74.00	50.17	24.55	34.33	2.39	---	---	Peak
2	1382.000	43.42	-30.58	74.00	49.27	25.44	33.94	2.65	---	---	Peak
3	1510.000	45.41	-28.59	74.00	51.20	25.18	33.75	2.79	---	---	Peak
4	1692.000	44.88	-29.12	74.00	50.57	24.98	33.67	3.00	---	---	Peak
5 @	1998.000	48.73	-25.27	74.00	52.78	26.13	33.52	3.34	---	---	Peak
6	2308.000	46.74	-27.26	74.00	48.99	27.91	33.80	3.64	---	---	Peak

Vertical



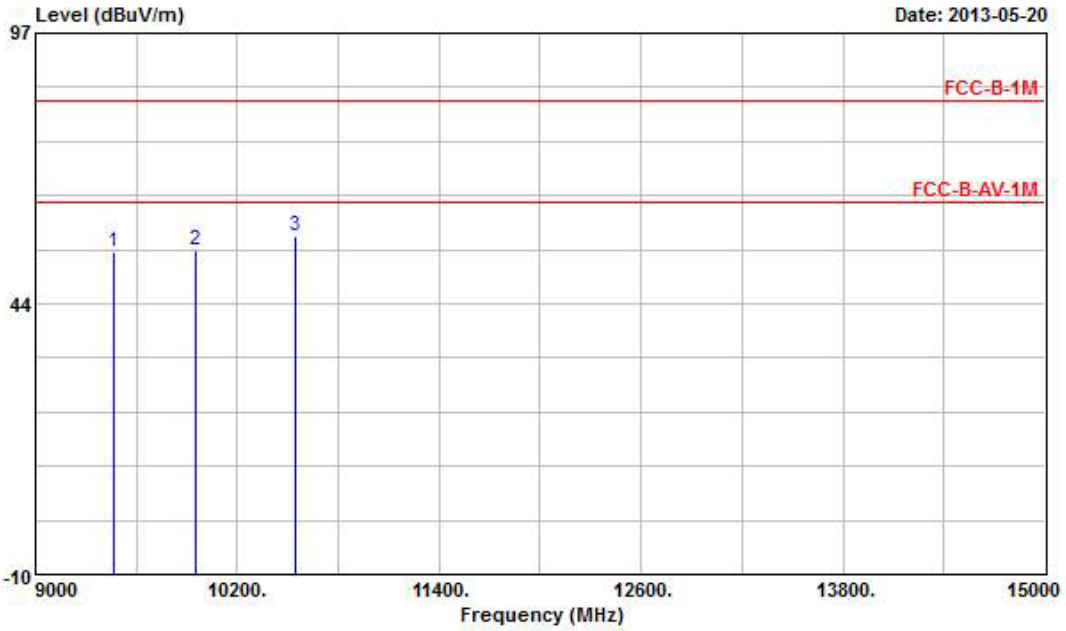
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	9534.000	54.67	-28.87	83.54	43.30	38.86	35.05	7.55	---	---	Peak
2	10142.000	55.74	-27.80	83.54	43.17	39.59	34.81	7.79	---	---	Peak
3 @	10676.000	56.64	-26.90	83.54	42.97	40.17	34.30	7.80	---	---	Peak

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1228.000	44.57	-29.43	74.00	51.15	25.10	34.17	2.49	---	---	Peak
2	1534.000	43.85	-30.15	74.00	49.64	25.14	33.74	2.81	---	---	Peak
3	1622.000	46.36	-27.64	74.00	52.16	24.98	33.70	2.92	---	---	Peak
4 @	1844.000	47.34	-26.66	74.00	52.27	25.51	33.59	3.16	---	---	Peak
5 @	1998.000	49.54	-24.46	74.00	53.59	26.13	33.52	3.34	100	178	Peak
6	2156.000	45.36	-28.64	74.00	48.07	27.46	33.66	3.49	---	---	Peak

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	9462.000	53.78	-29.76	83.54	42.58	38.74	35.05	7.52	---	---	Peak
2	9956.000	54.13	-29.41	83.54	42.06	39.28	34.98	7.77	---	---	Peak
3 @	10540.000	56.77	-26.77	83.54	43.32	40.06	34.41	7.80	---	---	Peak

7. Photographs of Test Configuration

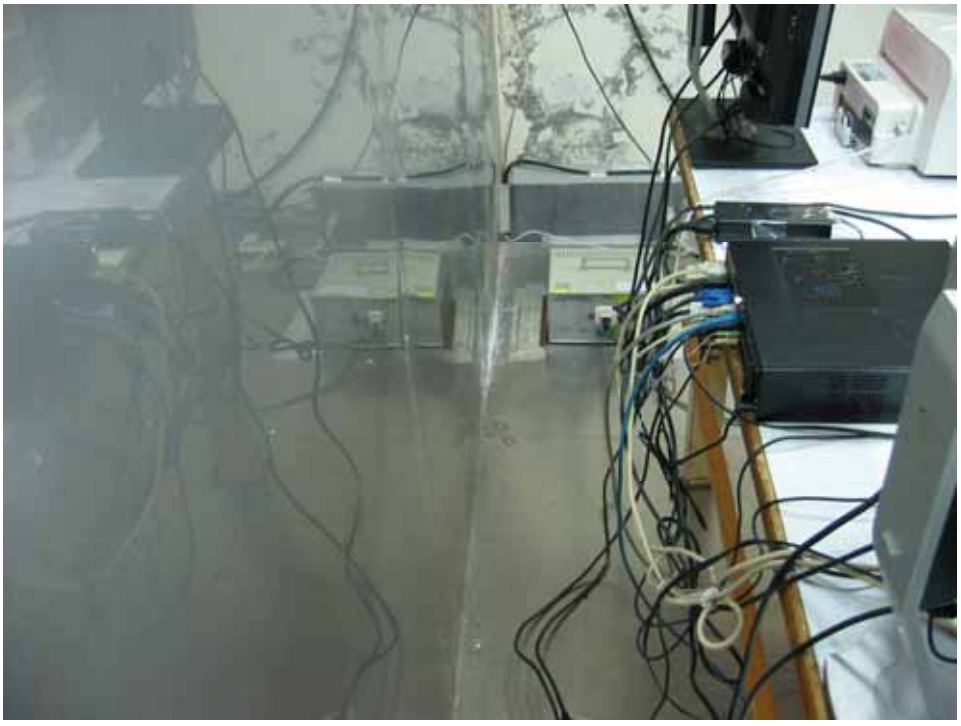
7.1. Photographs of AC Powerline Conducted Emissions Test Configuration

● The photographs show the configuration that generates the maximum emission.

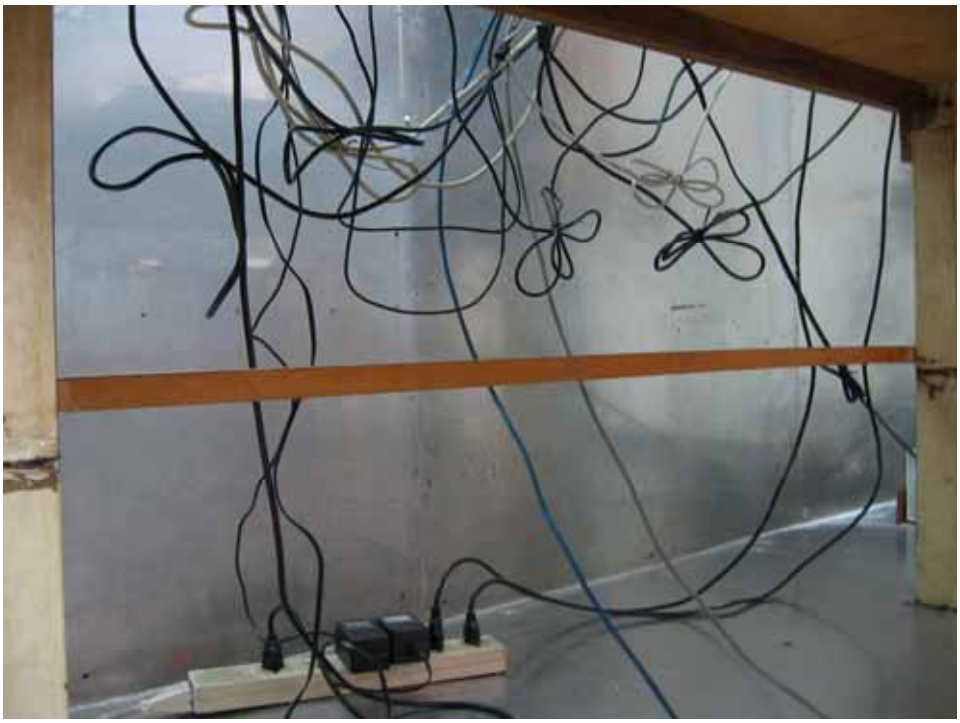
FRONT VIEW



REAR VIEW



SIDE VIEW



7.2. Photographs of Radiated Emissions Test Configuration

● The photographs show the configuration that generates the maximum emission.
For Below 1GHz

FRONT VIEW



REAR VIEW



8. List of Measuring Equipment Used

Conducted Emission

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver	R&S	ESCS 30	100357	9 kHz ~ 2.75 GHz	Nov. 22, 2012	Conduction (CO01-NH)
LISN	SCHAFFNER	NNB41	04/10053	9 kHz ~ 30 MHz	Nov. 20, 2012	Conduction (CO01-NH)
Power Filter	CORCOM	MR12030	N/A	30A*2	NCR	Conduction (CO01-NH)
RF Cable-CON	Suhner Switzerland	RG223/U	CB004	9 kHz ~ 30 MHz	Dec. 12, 2012	Conduction (CO01-NH)

Note: Calibration Interval of instruments listed above is one year.
NCR: NO CALIBRATION REQUEST.

Radiation Emission

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Open Area Test Site	SPORTON	OATS-10	OS01-NH	30 MHz - 1 GHz 10m	Jul. 29, 2012	Radiation (OS01-NH)
Amplifier	HP	8447D	2944A06292	0.1 MHz - 1.3 GHz	Apr. 25, 2013	Radiation (OS01-NH)
Spectrum Analyzer	R&S	FSP	838858/038	9 kHz – 7 GHz	Mar. 12, 2013	Radiation (OS01-NH)
Test Receiver	R&S	ESCS 30	100167	9 kHz - 2.75 GHz	Sep. 24, 2012	Radiation (OS01-NH)
Bilog Antenna	SCHAFFNER	CBL6111C	2738	30 MHz ~ 1 GHz	Mar. 25, 2013	Radiation (OS01-NH)
Turn Table	EMCO	1060-1.211	9507-1805	0 ~ 360 degree	NCR	Radiation (OS01-NH)
Antenna Mast	EMCO	1051-1.2	9503-1876	1 m ~ 4 m	NCR	Radiation (OS01-NH)
RF Cable-R10m	BELDEN	RG8/U	CB001	30 MHz ~ 1 GHz	Nov. 13, 2012	Radiation (OS01-NH)

Note: Calibration Interval of instruments listed above is one year.
NCR: NO CALIBRATION REQUEST.

Radiation Emission Above 1GHz

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP40	100593	9 kHz ~ 40 GHz	Sep. 14, 2012	Radiation
Amplifier	Agilent	8449B	3008A02326	1 GHz ~ 26.5 GHz	May. 17, 2013	Radiation
RF Cable-HIGH	SUHNER	SUCOFLEX 106	CB063-HF	1 GHz ~ 40 GHz	Nov. 21, 2012	Radiation
Horn Antenna	SCHWARZBECK	BBHA9120	BBHA9120D1130	1 GHz ~ 18 GHz	Apr. 29, 2013	Radiation

Note: Calibration Interval of instruments listed above is one year.

9. Uncertainty of Test Site

Uncertainty of Conducted Emission Measurement from 150kHz to 30MHz

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.20	Normal(k=2)	0.10
Cable loss	0.19	Normal(k=2)	0.10
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.75	Rectangular	1.01
Mismatch	+0.44/-0.46	U-shape	0.32
combined standard uncertainty Uc(y)			**1.31**
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)			**2.62**

Uncertainty of Radiated Emission Measurement from 30MHz to 1000MHz

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.17	Normal(k=2)	0.09
Antenna factor calibration	0.96	Normal(k=2)	0.48
Cable loss calibration	0.19	Normal(k=2)	0.10
Pre Amplifier Gain calibration	0.21	Normal(k=2)	0.11
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.76	Rectangular	1.02
Mismatch	+0.36/-0.38	U-shaped	0.26
combined standard uncertainty Uc(y)			**1.40**
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)			**2.80**

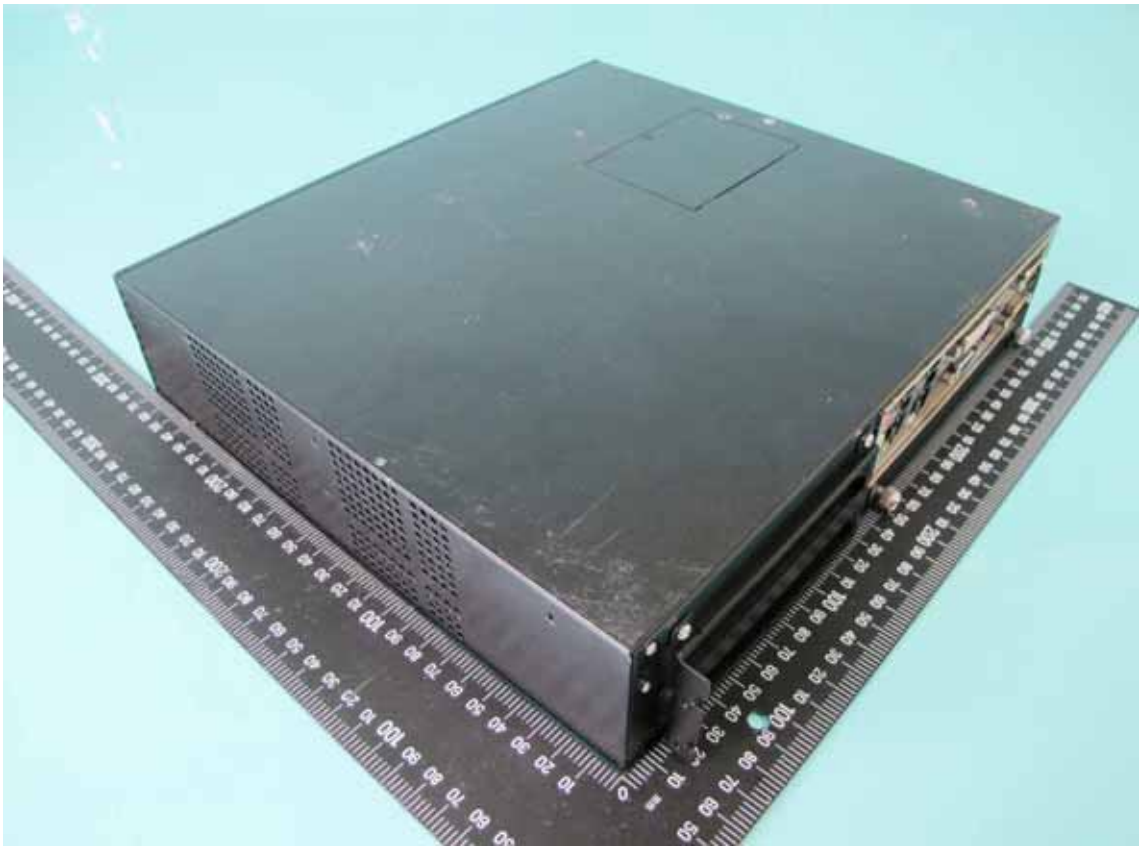
Uncertainty of Radiated Emission Measurement from 1GHz to 18GHz

Input quantity	X_i	Uncertainty of x_i		$u(x_i)$	c_i	$c_i\ u(x_i)$
		dB	Probability distribution function	dB		dB
Receiver reading	V_r	± 0.1	k=1	0.10	1	0.10
Attenuation: antenna-receiver	L_c	± 0.1	k=2	0.05	1	0.05
Receiver corrections:	δ RC	± 1.0	k=2	0.50	1	0.50
Antenna factor	AF	± 1.3	k=2	0.65	1	0.65
Horn antenna corrections:						
AF frequency interpolation	δAF_f	± 0.5	Rectangular	0.29	1	0.29
AF height deviations	δAF_h	± 0.5	Rectangular	0.29	1	0.29
Directivity difference	δ Adir	± 1.0	Rectangular	0.58	1	0.58
Phase centre location	δA_{ph}	± 1.0	Rectangular	0.58	1	0.58
Cross-polarization	δA_{cp}	± 0.9	Rectangular	0.52	1	0.52
Mismatch: antenna-receiver	δ M	+0.9/-1.0	U-shaped	0.67	1	0.67
Site corrections						
Site imperfections	δ SA	± 4.0	Triangular	1.63	1	1.63
Measurement system repeatability	R	± 1.53	Rectangular	0.884	1	0.884
Cable loss	C	± 0.24	Rectangular	0.139	1	0.139
Preamplifier factor	PA	± 0.17	Rectangular	0.099	1	0.099
				$u_c(y)=$		**2.39**
				$2\ u_c(y)=$		**4.78**

APPENDIX A. Photographs of EUT













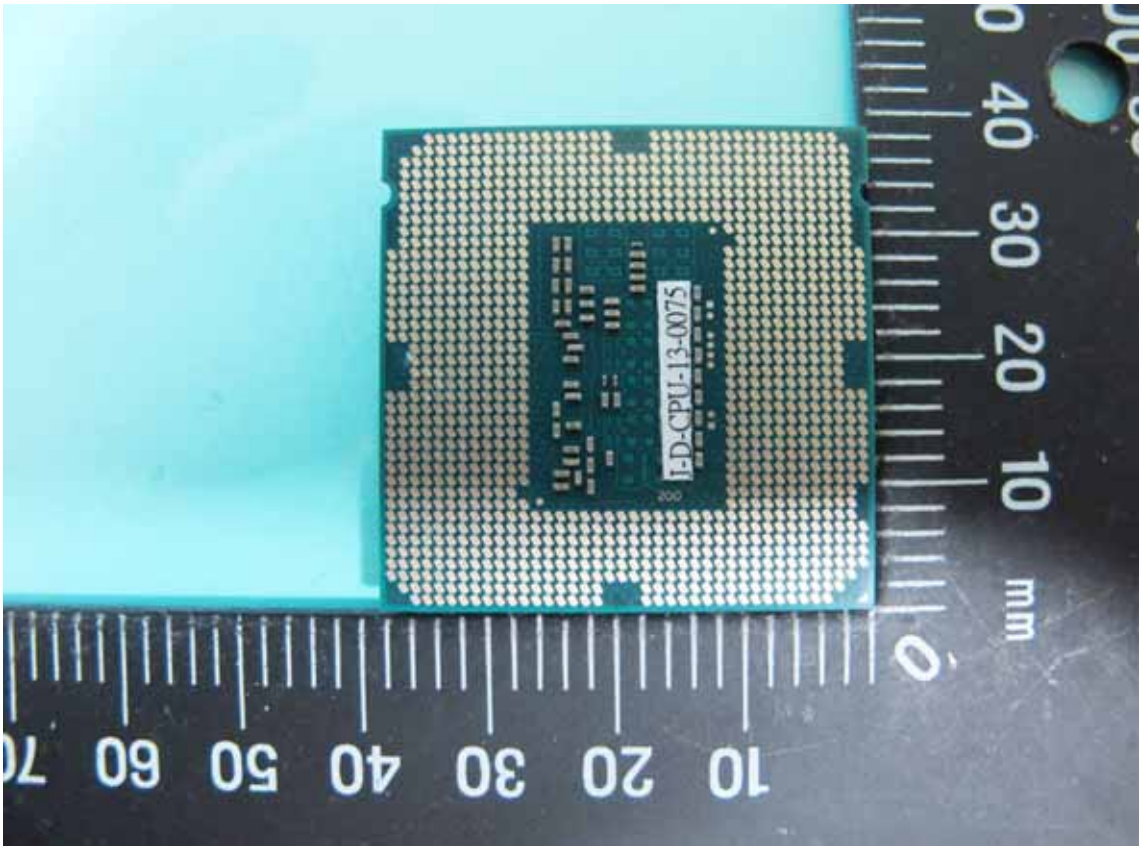

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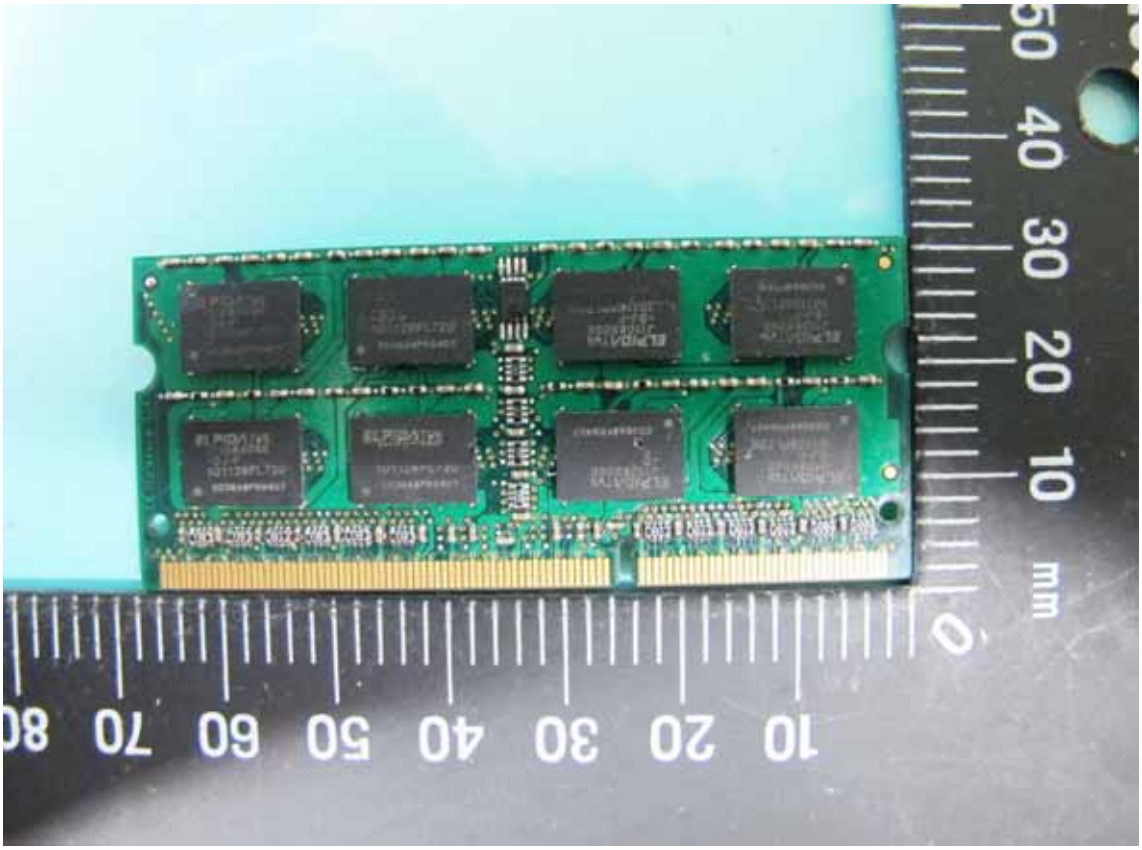

intel

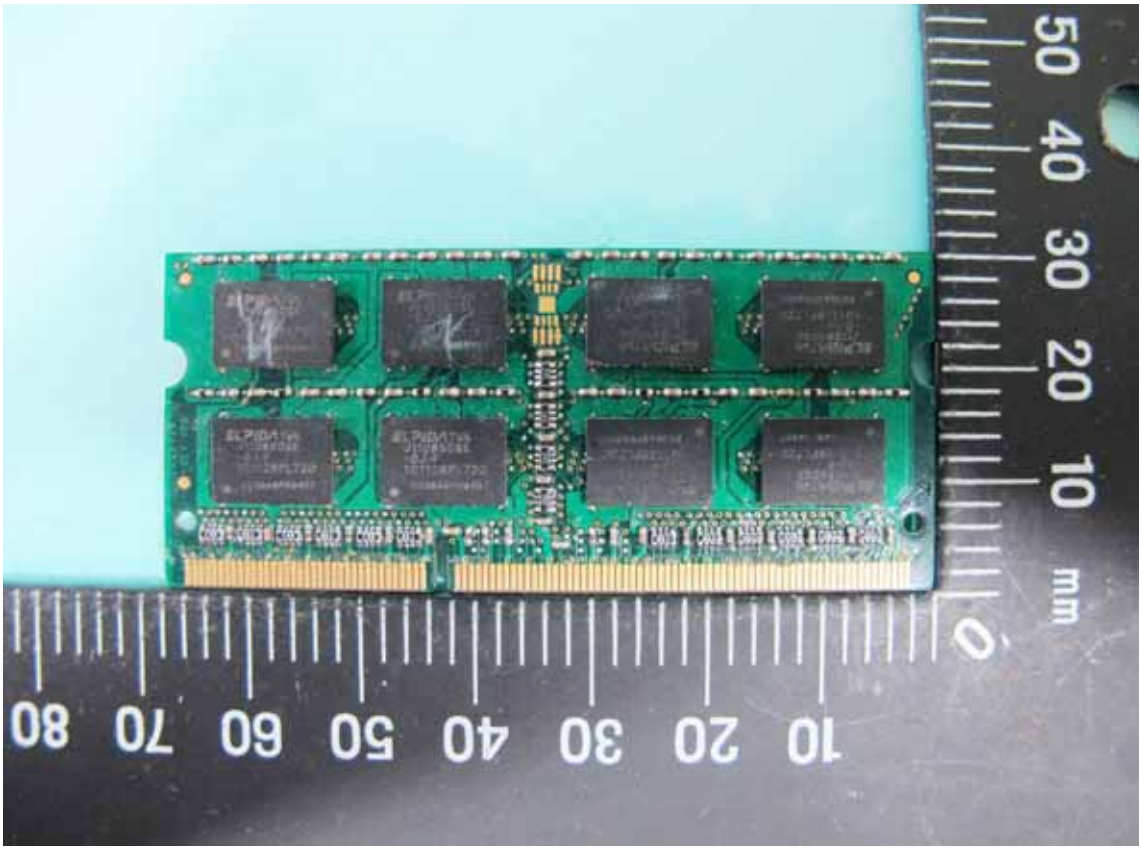


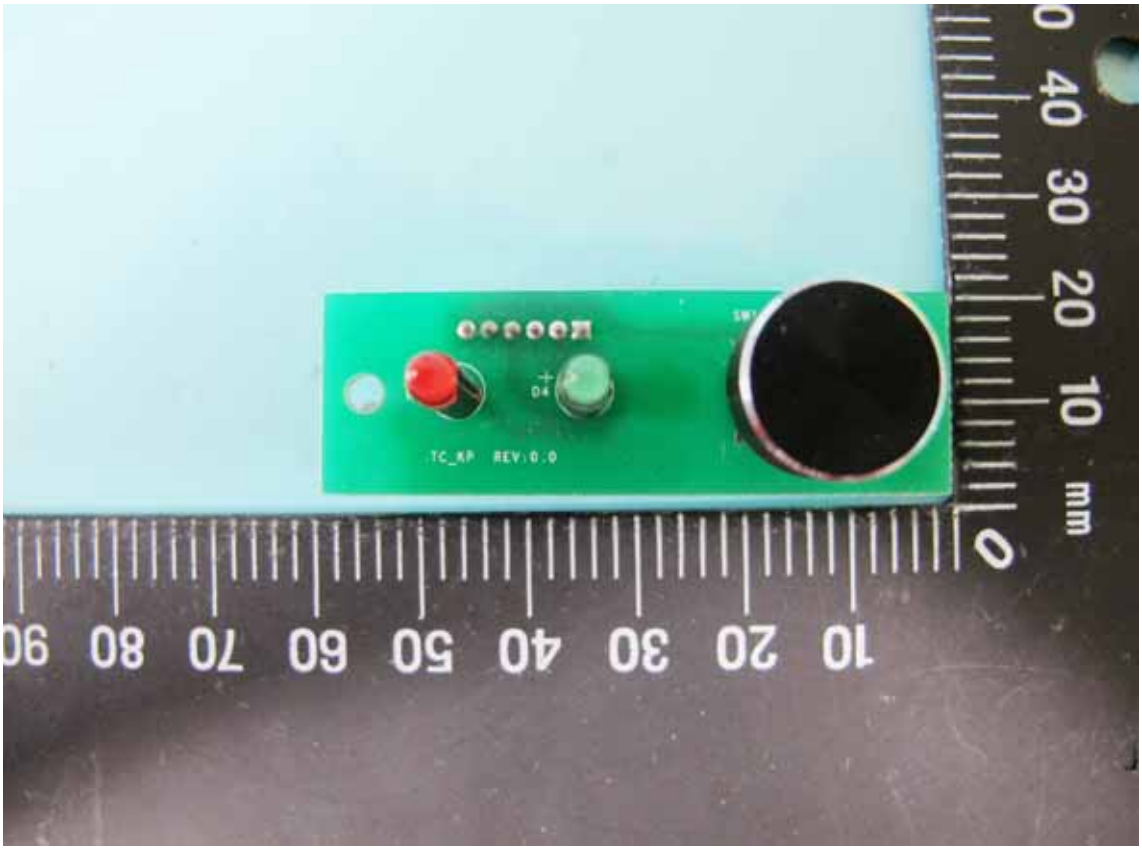


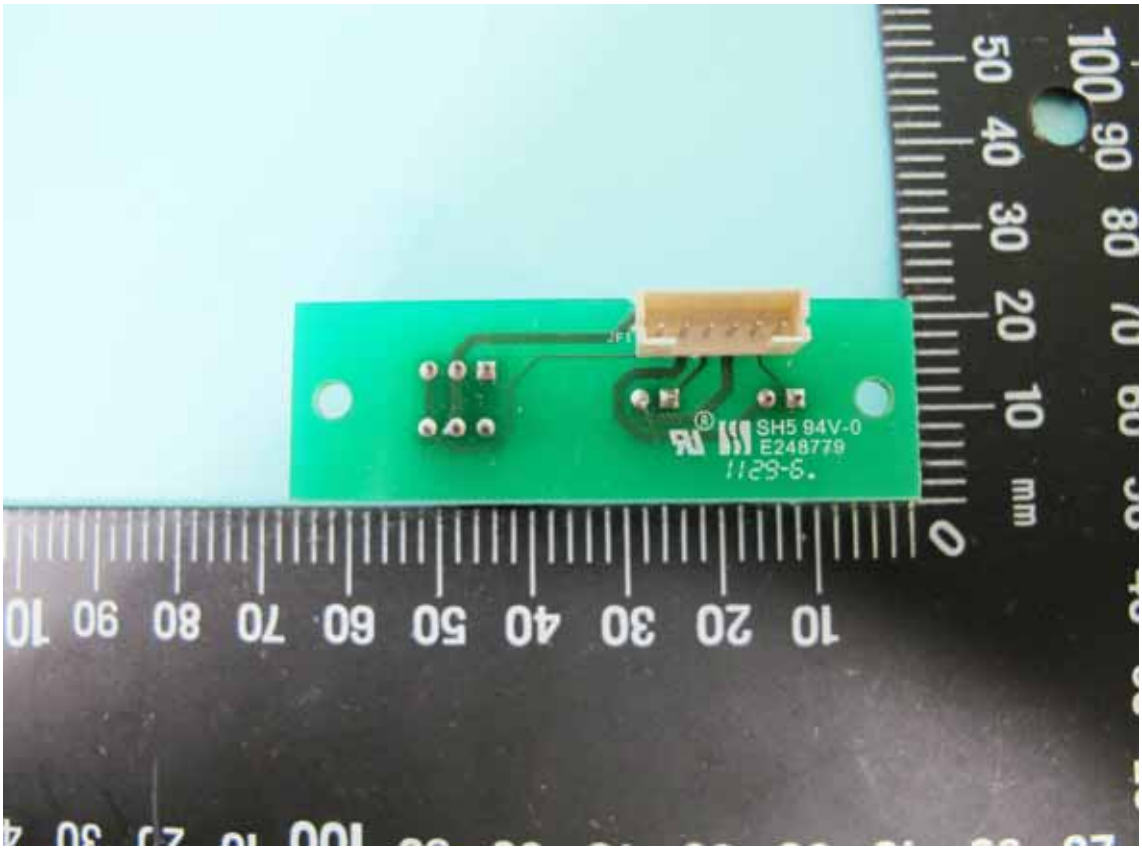

INTEL CONFIDENTIAL
QE7D ES 3.00GHZ
MALAY
L250B045
mm

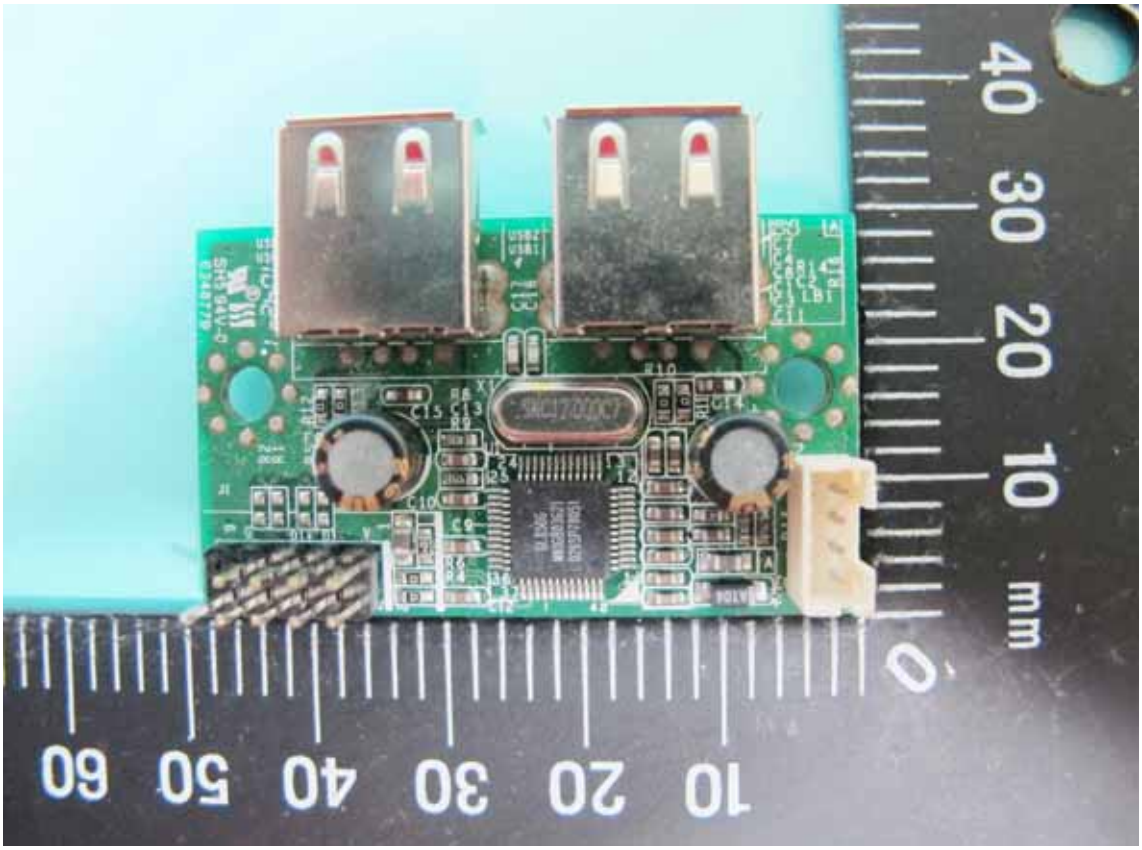

ED-CPU-13-0075
mm

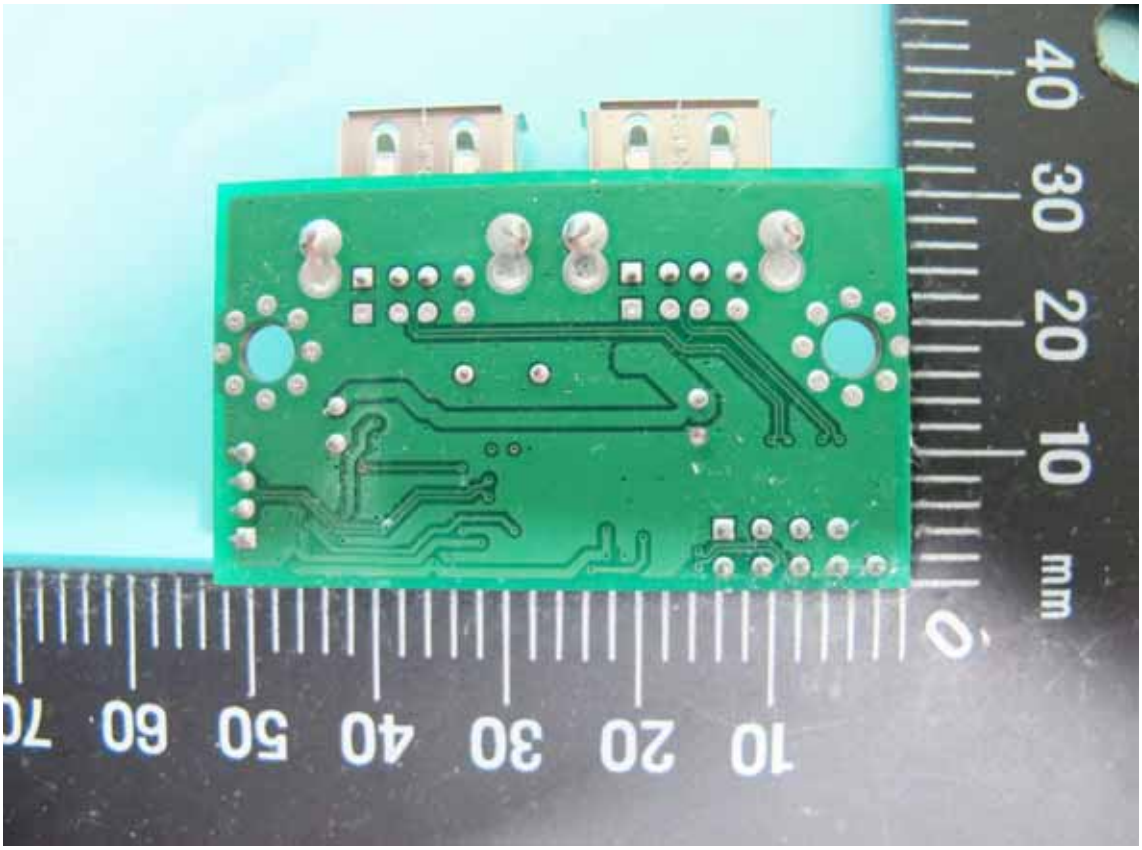

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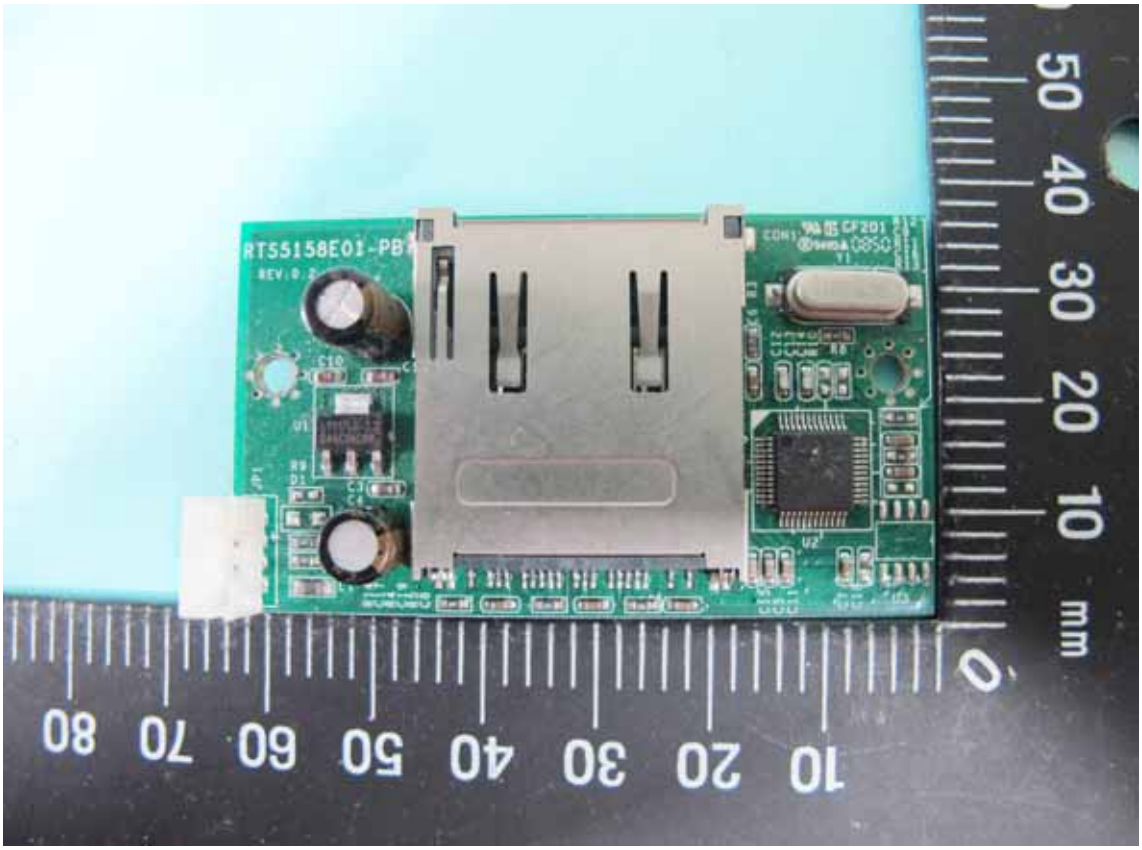

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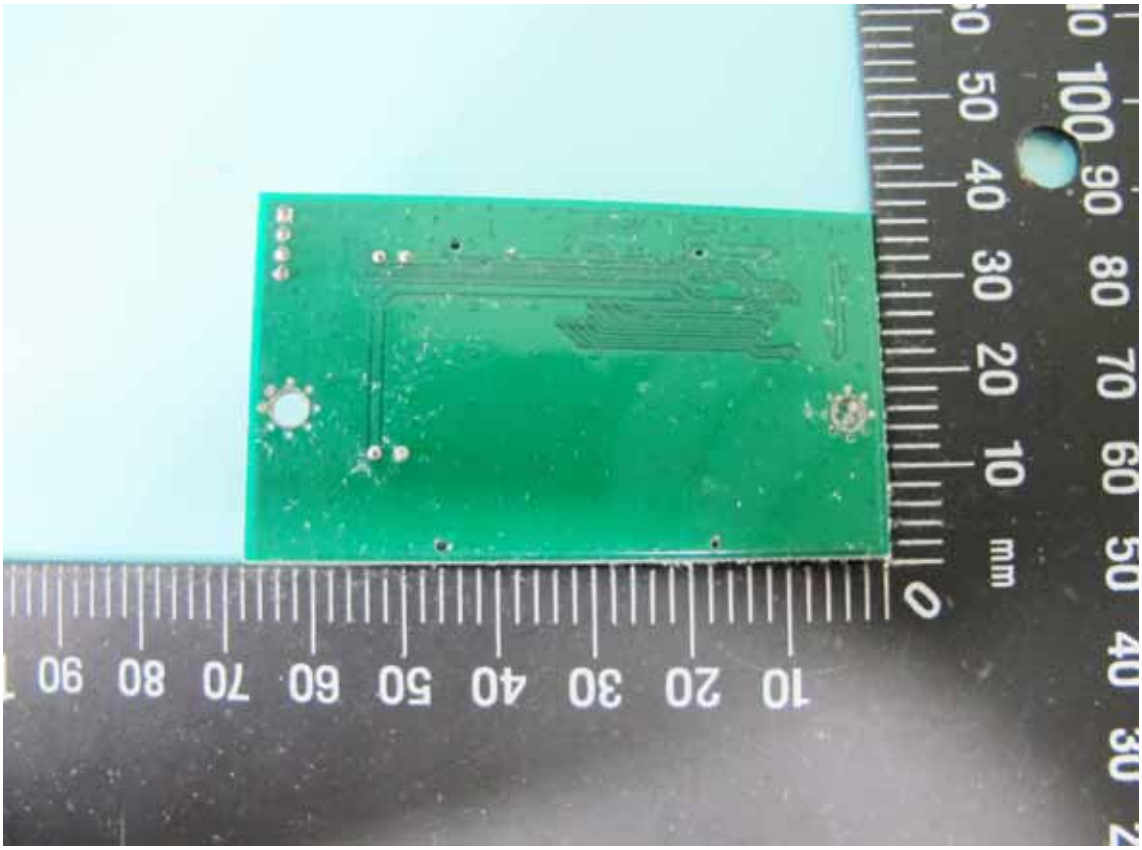

TC_KP REV:0.0
D4

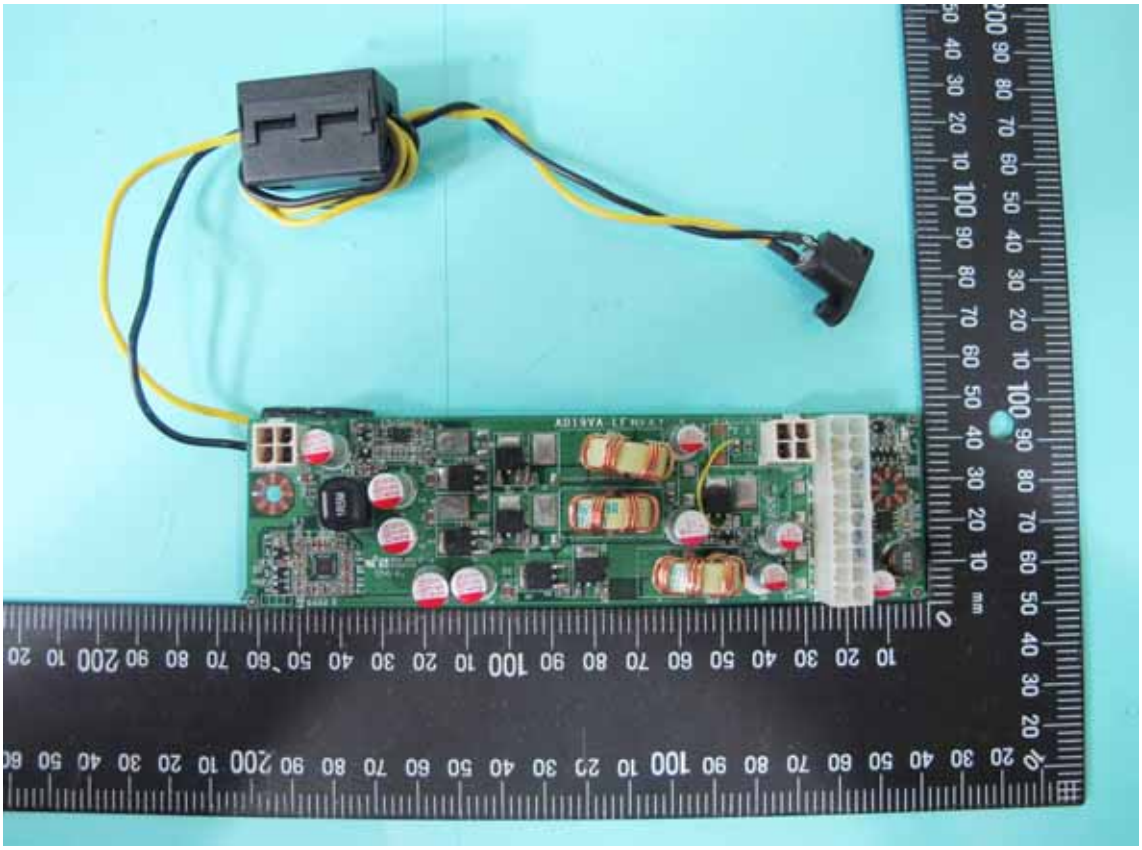

SH5 94V-0
E248779
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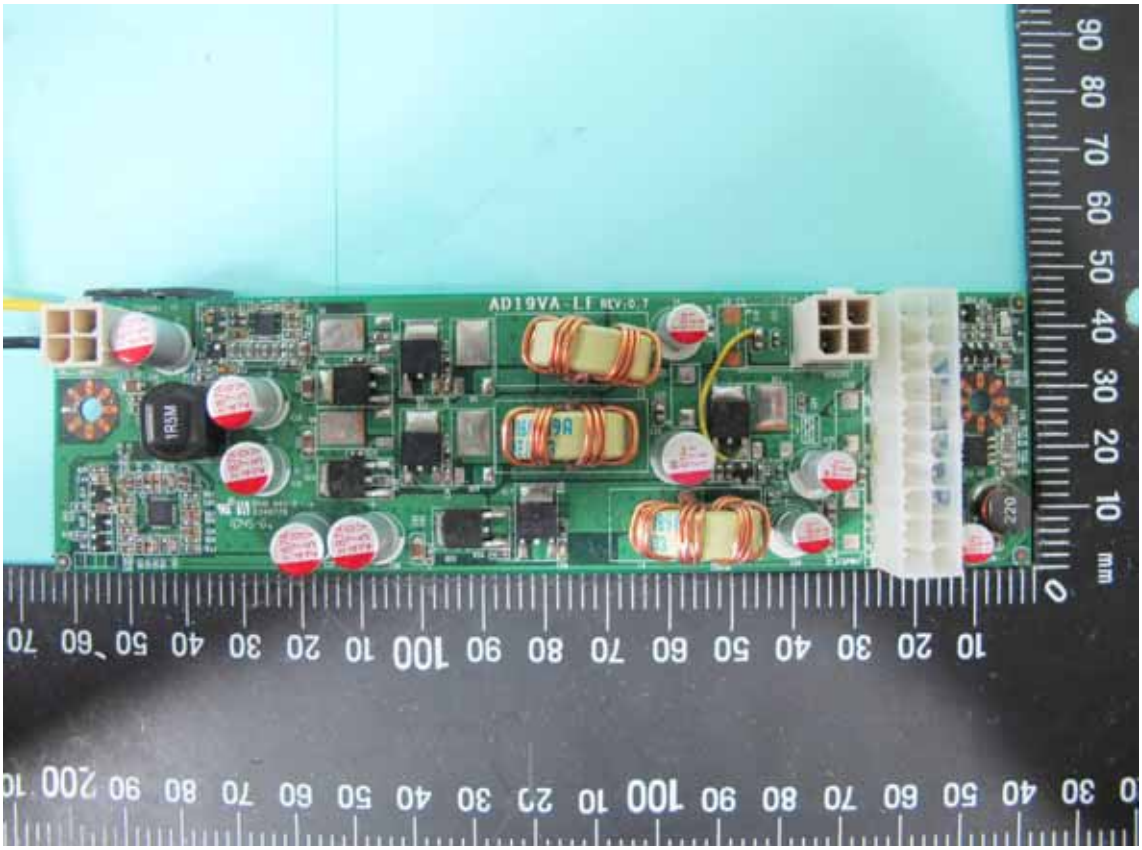


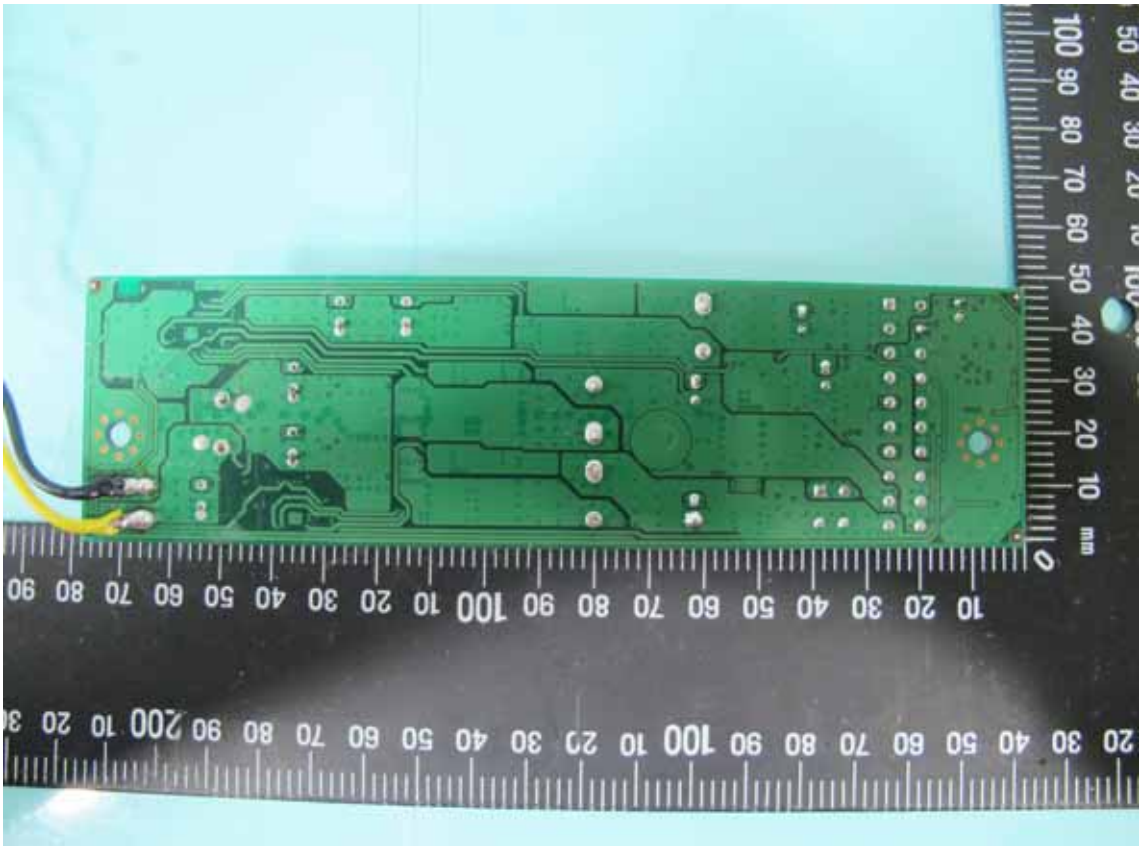



RT5158E01-PB
REV:0.2
C10
U1
U2
CON1
CF201
C8250
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10 20 30 40 50 60 70 80


0 10 50 40 30 20 10 mm 0
10 20 30 40 50 60 70 80 90



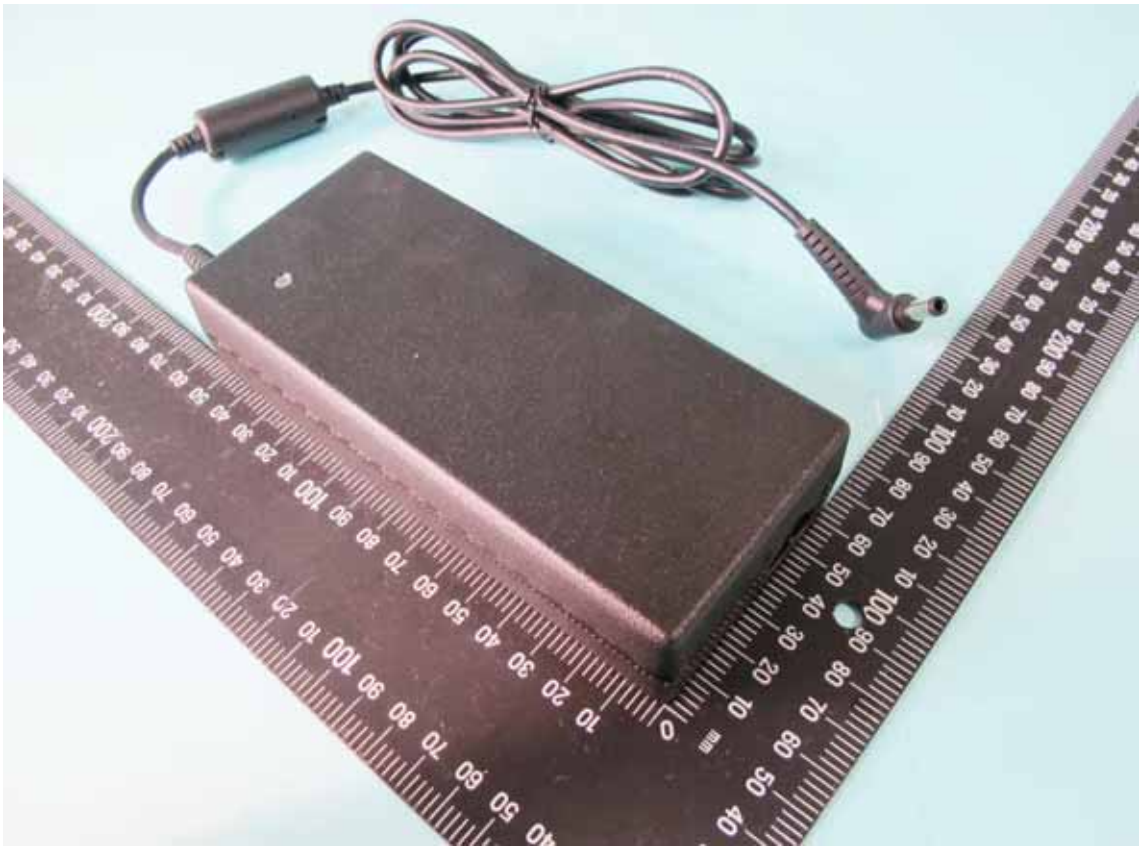

AD19VA-LF REV:0.1

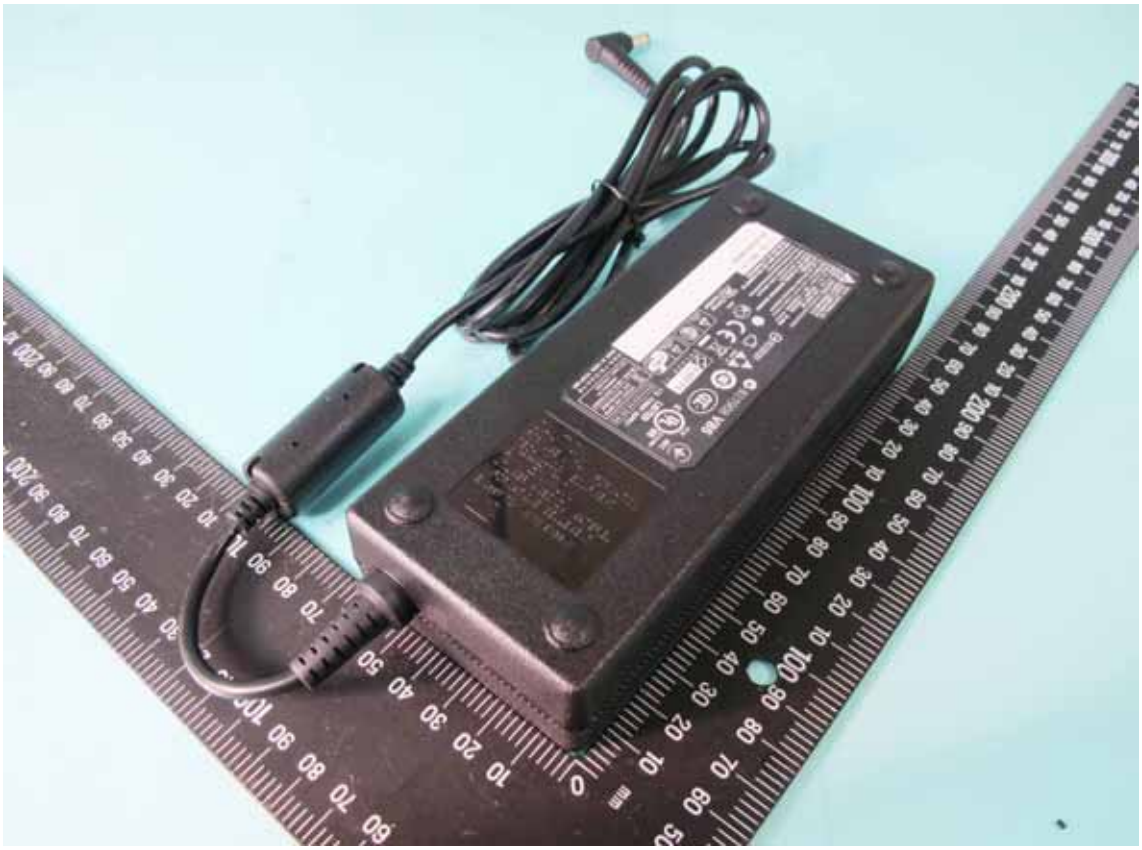



250GB
WD Scorpio Blue




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NTB-HD-1305
MDL : WD2500BEVT – 00A23T0
Product warranty will be void if seal, label or cover is removed or damaged.
Do not press on top cover.
WWN:50014EE259824130
DATE: 01 MAR 2010
LBA : 488397168
DCM : HHCTJHNB
5VDC : 0.55A
DCX : AA0922F35
R/N : 771672
U.S. Patents 6178056, 5956196,6289484, 6263459
Product of Thailand
Canada ICES – 003 Class B/
NMB – 003 Classe B
RoHS
SERIAL ATA
033015
E101559
N3565
WDT – 771672(B)
WD Scorpio® Blue™






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台達電子工業股份有限公司
AC/DC ADAPTER
MODEL: ADP-120ZB BB
INPUT: 100-240V~ 2.0A(2.0A) 50-60Hz
OUTPUT: 19V 6.32A(6.32A)
CAUTION:
For use with Information Technology Equipment.
ATTENTION :
UTILISER AVEC DU MATERIEL INFORMATIQUE SEULEMENT.
Endast för kontorsmaskin.
Apparatet må kun tilkoples jordet stikkontakt.
Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.
PRECAUCION PARA USO CON EQUIPOS DE TECNOLOGIA DE LA INFORMACION
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Energy Verified
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I.T.E. POWER SUPPLY
KTC HU10104-9228
Mfr.Name : DELTA ELECTRONICS (JIANGSU) LTD.
A/S Center : 2-515-5305
制造地:中国/製造地:中國
MADE IN CHINA DCWP MMC