CERTIFICATE

Issued Date: Nov. 27, 2013
Report No.: 13B0429R-ITUSP03V00

This is to certify that the following designated product

Product : SATA Flash Drive
Trade name : Apacer
Model Number : SFD25A(-M) 9.5mm HighSpeed
Company Name : Apacer Technology Inc

This product, which has been issued the test report listed as above in QuieTek Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

FCC CFR Title 47 Part 15 Subpart B: 2012 Class B, CISPR 22: 2008
ANSI C63.4: 2009

TEST LABORATORY

Vincent Lin / Director

QuieTek No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL:+886-2-8601-3788 FAX:+886-2-8601-3789 Email:service@quietek.com http://www.quietek.com

FCC Test Report

Product Name ： SATA Flash Drive

Model No. ： SFD25A(-M) 9.5mm HighSpeed

Applicant ： Apacer Technology Inc

Address ： 1F., No.32, Zhongcheng Rd., Tucheng Dist., New Taipei City 236, Taiwan (R.O.C)

Date of Receipt ： 2013/11/21

Issued Date ： 2013/11/27

Report No. ： 13B0429R-ITUSP03V00

Report Version ： V1.0

Testing Laboratory
0914

FCC DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2. 1077(a)

The following equipment:

Product : SATA Flash Drive

Trade name : Apacer

Model Number : SFD25A(-M) 9.5mm HighSpeed

It's herewith confirmed to comply with the requirements of FCC Part 15 Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

The result of electromagnetic emission has been evaluated by QuieTek EMC laboratory and showed in the test report.
(Report No. : 13B0429R-ITUSP03V00)

It is understood that each unit marketed is identical to the device as tested, and any changes to the device that could adversely affect the emission characteristics will require retest.

The following importer / manufacturer is responsible for this declaration:

Company Name _____

Company Address _____

Telephone _____ Facsimile : _____

Person is responsible for marking this declaration:

_____ _____

Name (Full name) Position / Title

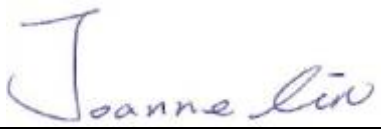
_____ _____

Date Legal Signature

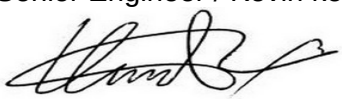
Test Report Certification

Issued Date : 2013/11/27
Report No. : 13B0429R-ITUSP03V00

Product Name	:	SATA Flash Drive
Applicant	:	Apacer Technology Inc
Address	:	1F., No.32, Zhongcheng Rd., Tucheng Dist., New Taipei City 236, Taiwan (R.O.C)
Manufacturer	:	Apacer Technology Inc.
Model No.	:	SFD25A(-M) 9.5mm HighSpeed
EUT Rated Voltage	:	Power by PC
EUT Test Voltage	:	AC 120 V / 60 Hz
Trade Name	:	Apacer
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart B: 2012, Class B CISPR 22: 2008, ANSI C63.4: 2009
Test Result	:	Complied
Performed Location	:	Quietek Corporation (Linkou Laboratory) No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C. TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789

Documented By : 
(Senior Adm. Specialist / Joanne Lin)

Reviewed By : 
(Senior Engineer / Kevin ker)

Approved By : 
(Director / Vincent Lin)

Laboratory Information

We, **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scopes:

Taiwan R.O.C.	**:**	**BSMI, NCC, TAF**
Norway	**:**	**Nemko**
USA	**:**	**FCC**
Japan	**:**	**VCCI**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

LinKou Testing Laboratory :
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

Suzhou (China) Testing Laboratory :
No. 99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., Suzhou,China.
TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : service@quietek.com

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1. General Information

1.1. EUT Description

Product Name	SATA Flash Drive
Trade Name	Apacer
Model No.	SFD25A(-M) 9.5mm HighSpeed

1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

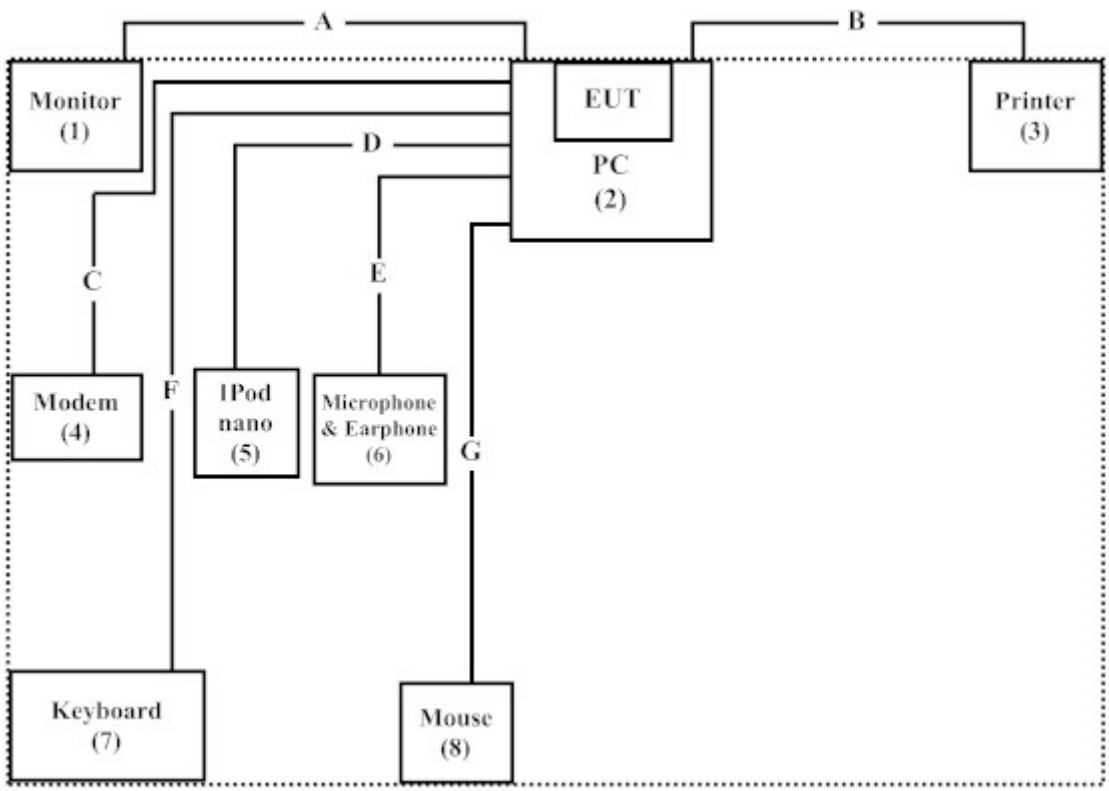
Pre-Test Mode	
Mode 1: Normal Operation	
Final Test Mode	
Emission	Mode 1: Normal Operation

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Monitor	DELL	U2410f	CN-082WXD-72872-1AV-AD8L	Non-Shielded, 1.8m
2	PC	DELL	Vostro230	1R7Z62S	Non-Shielded, 1.8m
3	Printer	EPSON	StyLus C63	FAPY012396	Non-Shielded, 1.8m
4	Modem	ACEEX	DM-1414	0102027556	Non-Shielded, 1.8m
5	IPod nano	Apple	A1236	7K823DY0Y0P	N/A
6	Microphone & Earphone	Ergotech	ET-E201	N/A	N/A
7	Keyboard	Logitech	Y-SM46	867404-0121	N/A
8	Mouse	Logitech	M-SBM96B	810-000439	N/A

1.4. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	D-SUB Cable	Shielded, 1.8m, with two ferrite cores bonded.
B	USB Cable	Shielded, 1.5m
C	RS-232 Cable	Shielded, 1.5m
D	Audio Cable	Non-Shielded, 1.6m
E	Microphone & Earphone Cable	Non-Shielded, 1.6m
F	Keyboard Cable	Shielded, 1.8m
G	Mouse Cable	Shielded, 1.8m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipments.
3	All the features of the EUT operation normally.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart B: 2012 Class B, ANSI C63.4: 2009	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart B: 2012 Class B, ANSI C63.4: 2009	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR8

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	100369	2013/09/14
LISN	R&S	ESH3-Z5	836679/017	2013/01/16
LISN	R&S	ENV216	100097	2013/01/16
Coaxial Cable	QTK(Arnist)	RG 400	LC018-RG	2013/06/26

Radiated Emission / Site7

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2930	2013/05/06
EMI Test Receiver	R&S	ESCI	100649	2013/04/18
Coaxial Cable	QTK(Arnist)	RG 214	LC007-RG	2013/06/23
Site7 NSA	QTK	N/A	N/A	2013/06/23
Pre-Amplifier	QTK	AP/0100A	CHM/1009094	2013/06/23

Radiated Emission / CB7

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESU26	100433	2013/07/29
Horn Antenna	ETS-Lindgren	3117	00135205	2013/03/26
Horn Antenna	SCHWARZBECK	9120D	576	2013/11/19
Pre-Amplifier	QuieTek	AP-180C	CHM/071920	2013/06/24
CB7 VSWR	QTK	N/A	N/A	2013/07/25

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

2.4. Test Environment

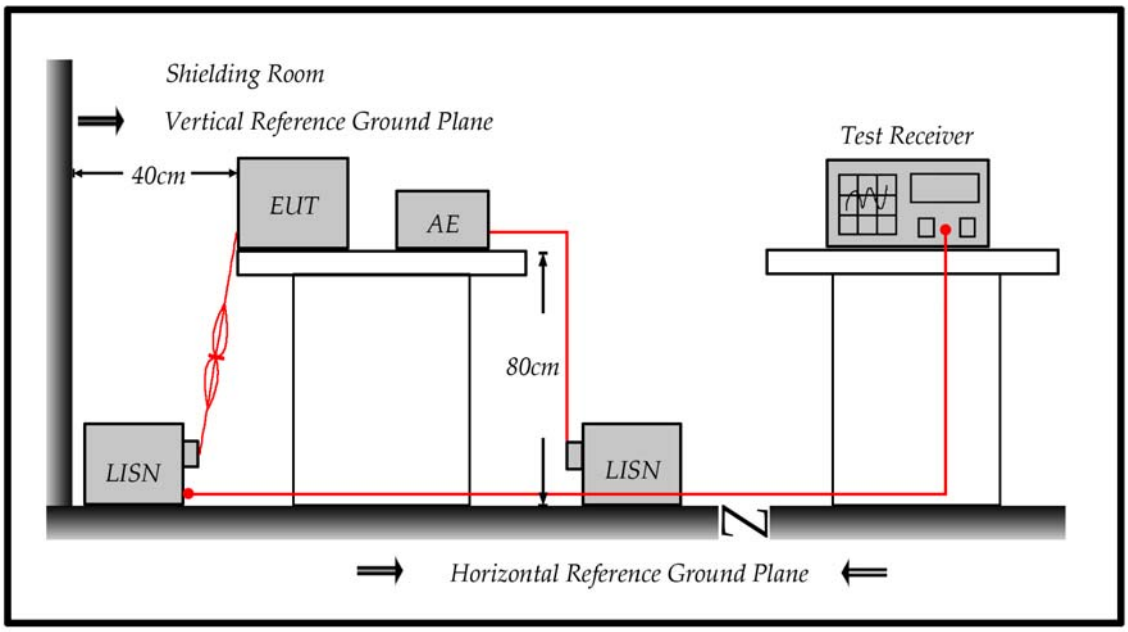
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	23
	Humidity (%RH)	25-75	59
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	23
	Humidity (%RH)	25-75	60
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission

3.1. Test Specification

According to Standard : FCC Part 15 Subpart B, ANSI C63.4

3.2. Test Setup



3.3. Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 – 46
0.50-5.0	56	46
5.0 - 30	60	50

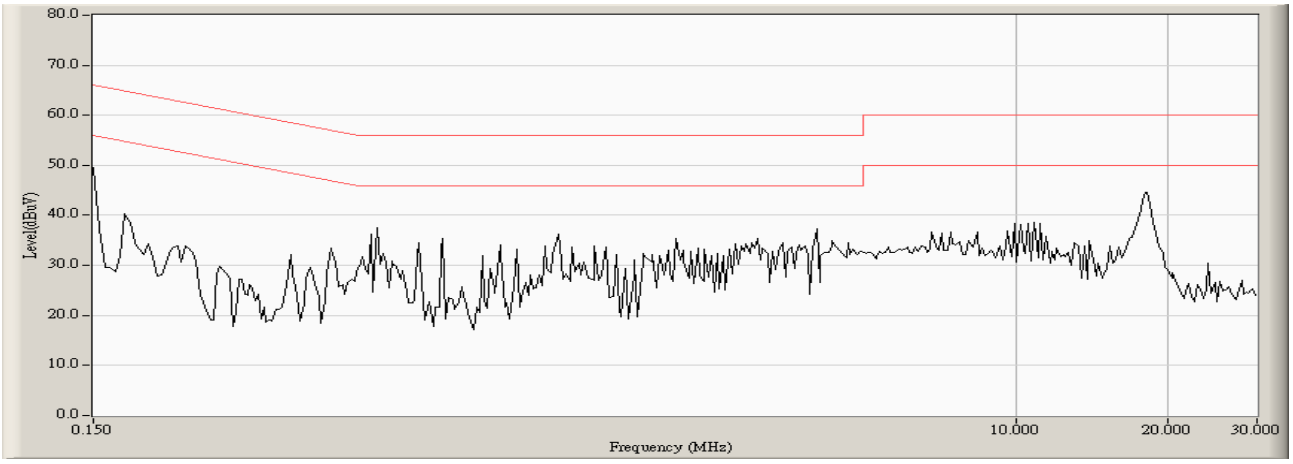
Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

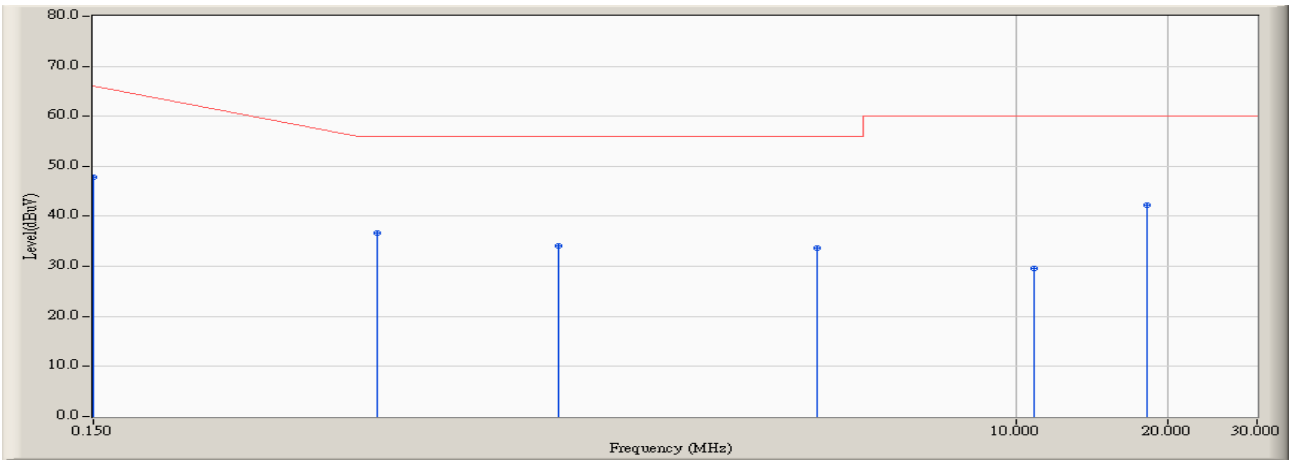
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.
(Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Test Result

Site : SR8	**Time : 2013/11/22 - 13:34**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : SATA Flash Drive	**Probe : ENV216_L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**



Site : SR8	**Time : 2013/11/22 - 13:35**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : SATA Flash Drive	**Probe : ENV216_L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**

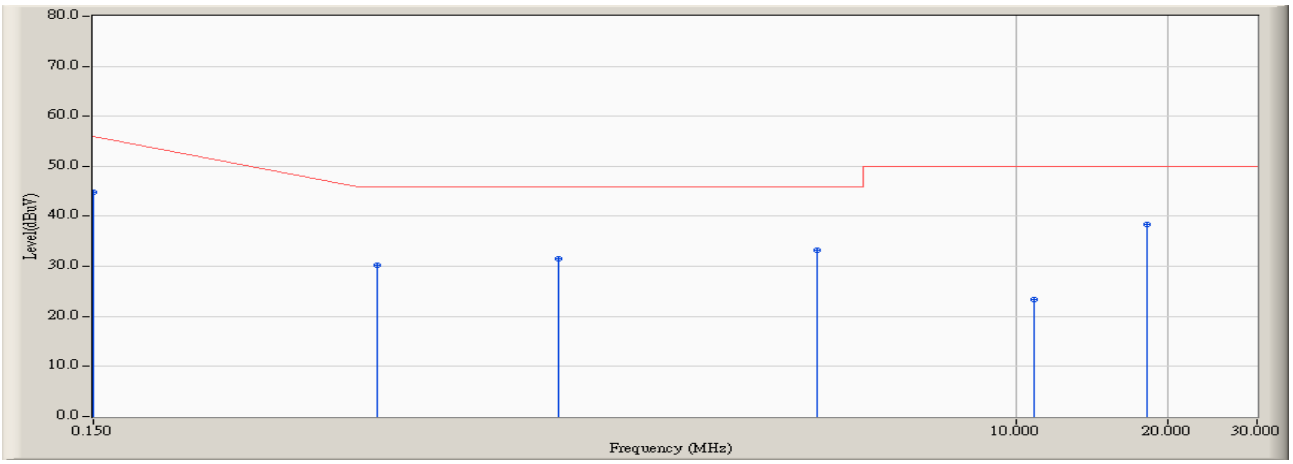


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.150	9.696	38.230	47.926	-18.074	66.000	QUASIPEAK
2		0.545	9.714	26.950	36.664	-19.336	56.000	QUASIPEAK
3		1.248	9.749	24.360	34.109	-21.891	56.000	QUASIPEAK
4		4.037	9.820	23.950	33.770	-22.230	56.000	QUASIPEAK
5		10.861	9.880	19.780	29.660	-30.340	60.000	QUASIPEAK
6	*	18.158	9.900	32.320	42.220	-17.780	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	**Time : 2013/11/22 - 13:35**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : SATA Flash Drive	**Probe : ENV216_L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**

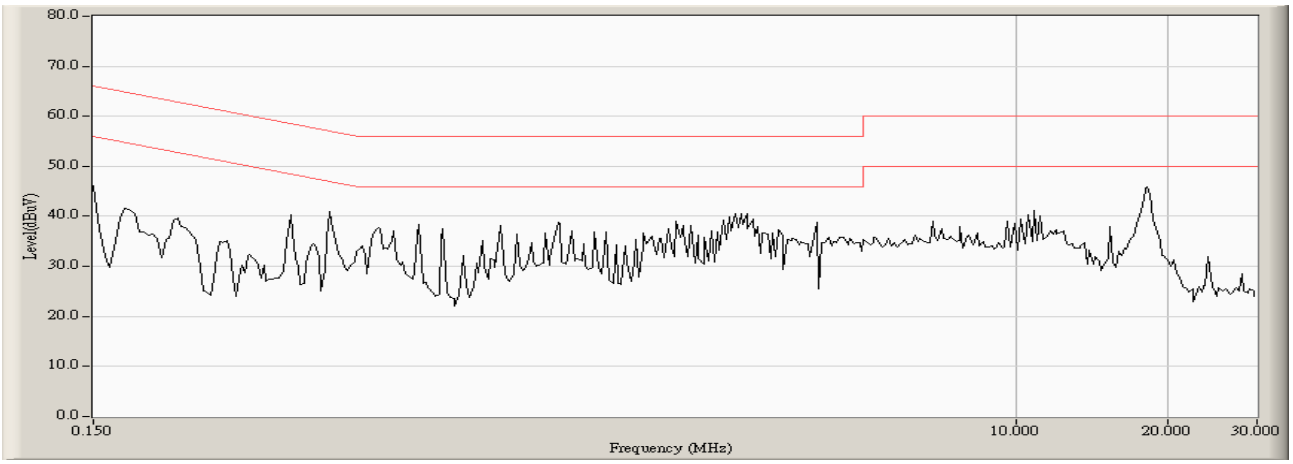


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.150	9.696	35.080	44.776	-11.224	56.000	AVERAGE
2		0.545	9.714	20.470	30.184	-15.816	46.000	AVERAGE
3		1.248	9.749	21.850	31.599	-14.401	46.000	AVERAGE
4		4.037	9.820	23.330	33.150	-12.850	46.000	AVERAGE
5		10.861	9.880	13.600	23.480	-26.520	50.000	AVERAGE
6		18.158	9.900	28.470	38.370	-11.630	50.000	AVERAGE

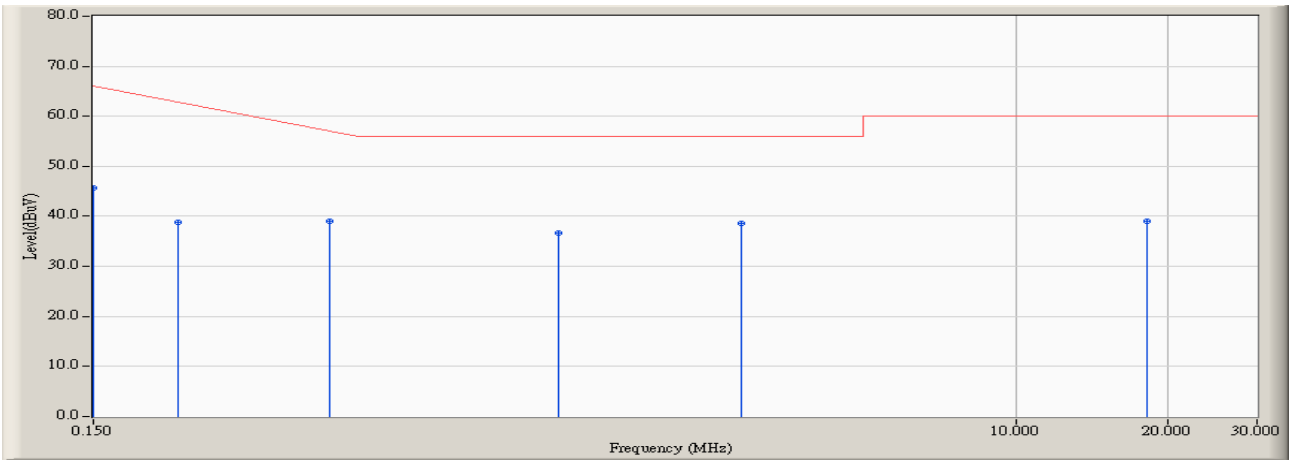
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	**Time : 2013/11/22 - 13:36**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : SATA Flash Drive	**Probe : ENV216_N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**



Site : SR8	**Time : 2013/11/22 - 13:36**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : SATA Flash Drive	**Probe : ENV216_N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**

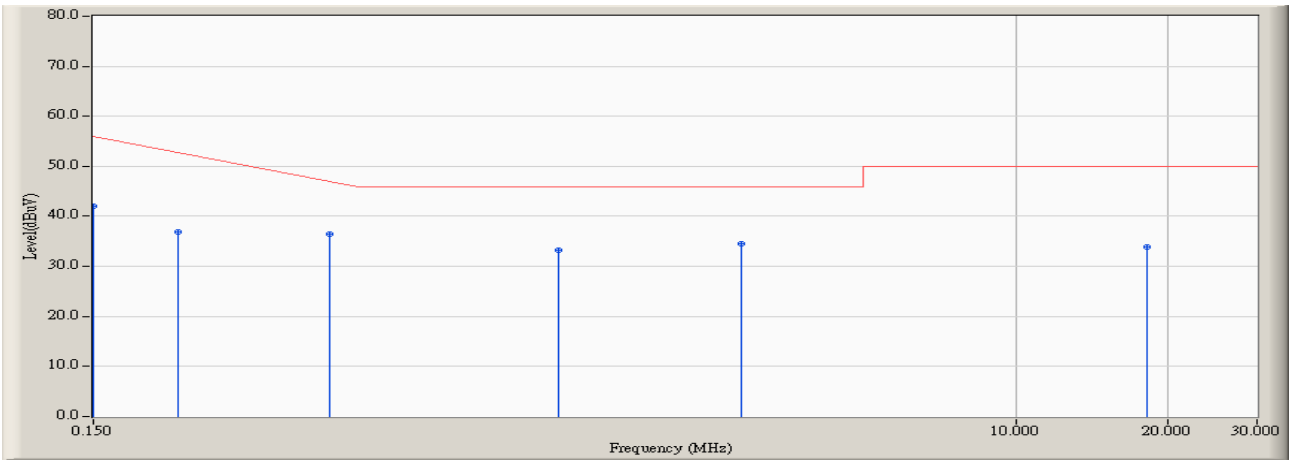


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.150	9.676	35.980	45.656	-20.344	66.000	QUASIPEAK
2		0.220	9.680	29.200	38.880	-25.120	64.000	QUASIPEAK
3		0.439	9.690	29.300	38.990	-18.753	57.743	QUASIPEAK
4		1.248	9.736	26.860	36.596	-19.404	56.000	QUASIPEAK
5	*	2.869	9.800	28.720	38.520	-17.480	56.000	QUASIPEAK
6		18.170	10.000	29.060	39.060	-20.940	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	**Time : 2013/11/22 - 13:36**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : SATA Flash Drive	**Probe : ENV216_N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.150	9.676	32.380	42.056	-13.944	56.000	AVERAGE
2		0.220	9.680	27.140	36.820	-17.180	54.000	AVERAGE
3	*	0.439	9.690	26.810	36.500	-11.243	47.743	AVERAGE
4		1.248	9.736	23.540	33.276	-12.724	46.000	AVERAGE
5		2.869	9.800	24.770	34.570	-11.430	46.000	AVERAGE
6		18.170	10.000	23.870	33.870	-16.130	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

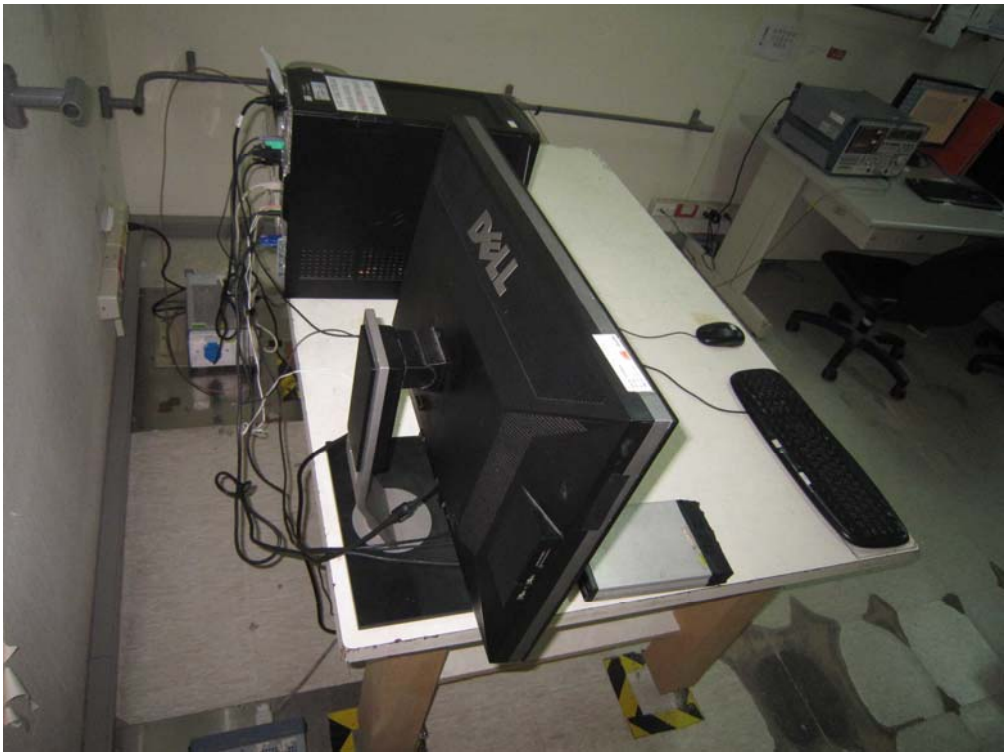
3.6. Test Photograph

Test Mode : Mode 1: Normal Operation

Description : Front View of Conducted Test

Test Mode : Mode 1: Normal Operation

Description : Back View of Conducted Test



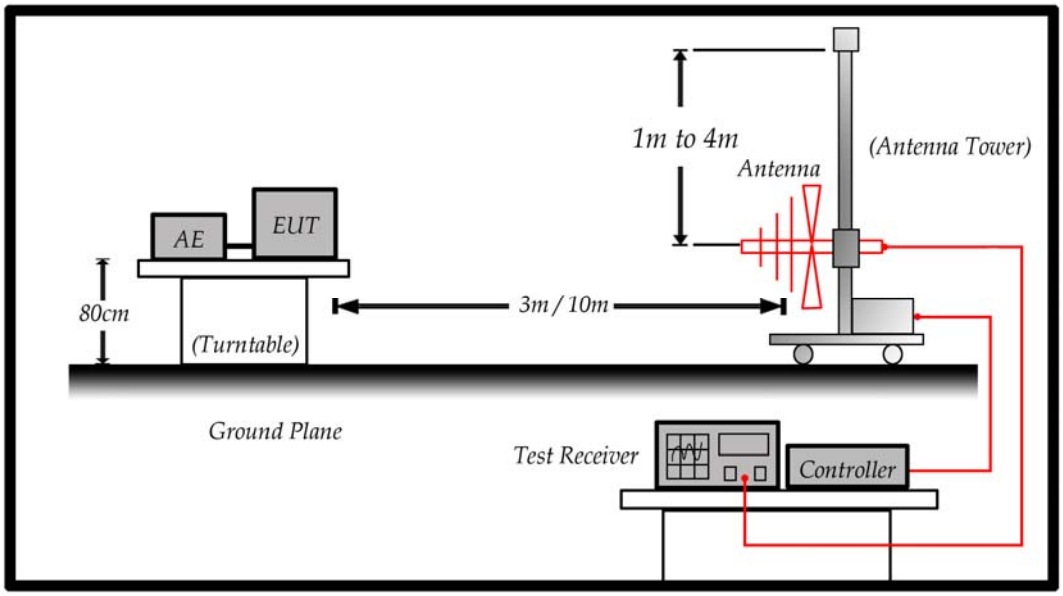
4. Radiated Emission

4.1. Test Specification

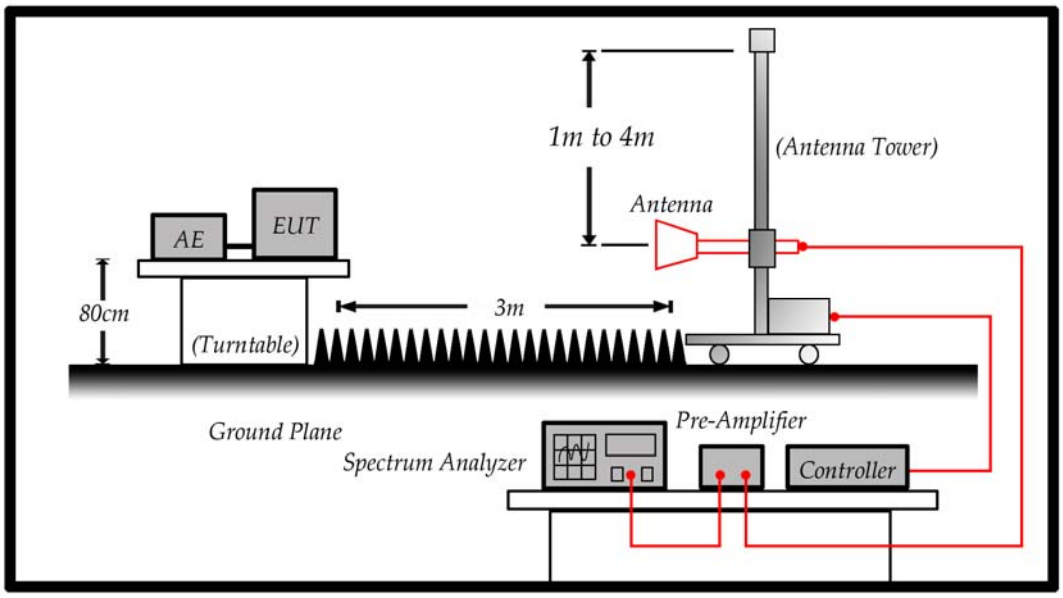
According to EMC Standard : FCC Part 15 Subpart B, ANSI C63.4

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

Under 1GHz test shall not exceed the following value:

Limits		
Frequency (MHz)	Distance (m)	dBuV/m
30 – 230	10	30
230 – 1000	10	37

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Above 1GHz test shall not exceed the following value:

FCC Part 15 Subpart B Paragraph 15.109 Limits (dBuV/m)		
Frequency (MHz)	Distance (m)	dBuV/m
30-88	3	40
88-216	3	43.5
216-960	3	46
Above 960	3	54

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
3. RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.

The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

For an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the folowing table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5^{th} harmonic of the highest frequency or 40 GHz, whichever is lower

On any frequency or frequencies below or equal to 1000 MHz, the radiated limits shown are based on measuring equipment employing a quasi-peak detector function and above 1000 MHz, the radiated limits shown are based measuring equipment employing an average detector function.

When average radiated emission measurement are included emission measurement Above 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

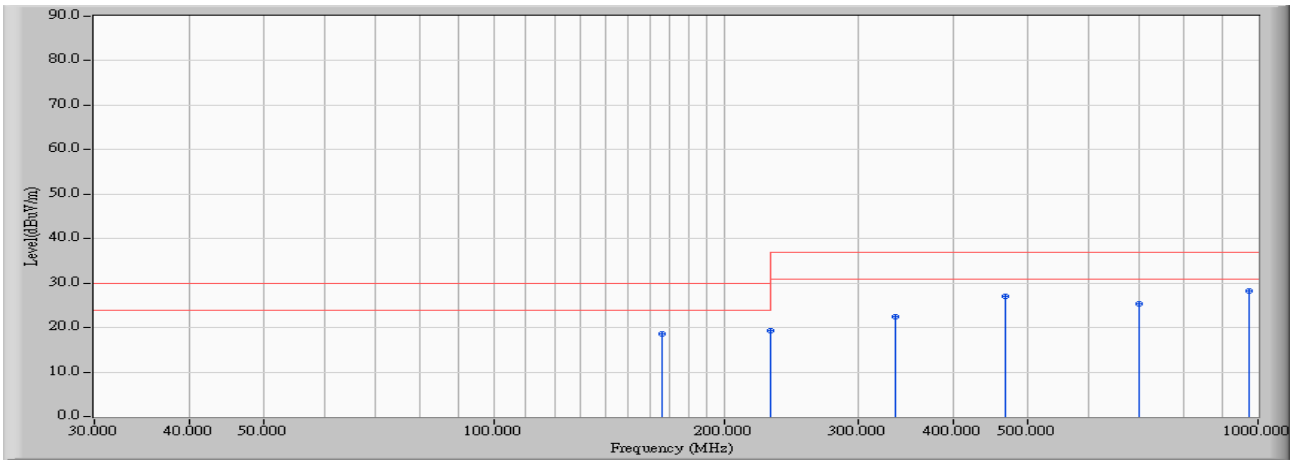
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

For class B, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and 3 meters for above 1GHz.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30) is 120 kHz and above 1GHz is 1MHz.

4.5. Test Result

Site : Site7	**Time : 2013/11/22 - 15:15**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : SATA Flash Drive	**Probe : Site7_CBL6112_10M_1307 - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1**

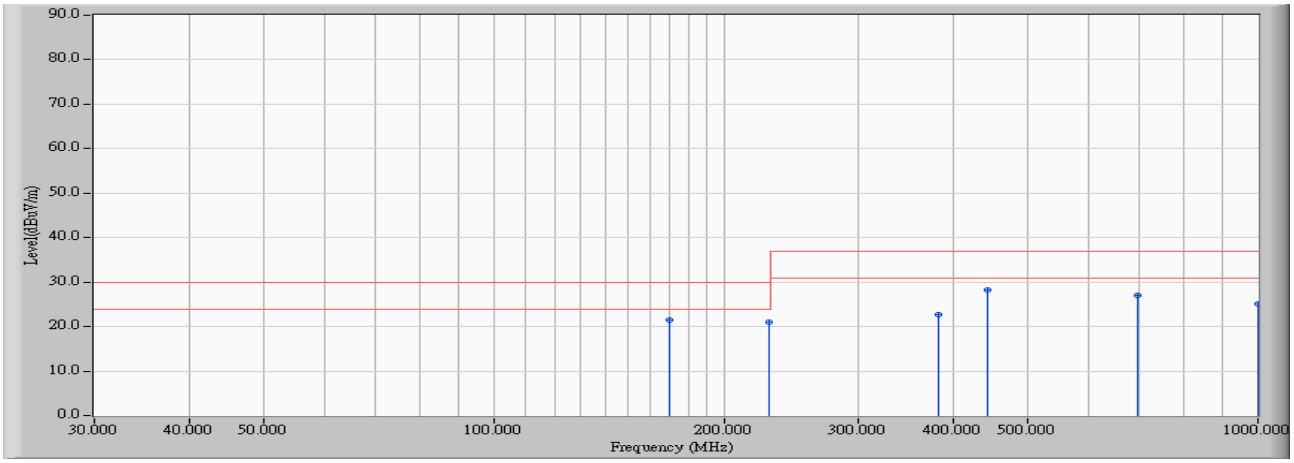


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		166.080	-20.100	38.700	18.600	-11.400	30.000	QUASIPEAK
2		229.800	-18.602	37.800	19.197	-10.803	30.000	QUASIPEAK
3		336.000	-13.661	36.200	22.539	-14.461	37.000	QUASIPEAK
4		467.600	-9.217	36.200	26.984	-10.016	37.000	QUASIPEAK
5		698.000	-6.787	32.100	25.313	-11.687	37.000	QUASIPEAK
6	*	972.800	-2.200	30.330	28.129	-8.871	37.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : Site7	**Time : 2013/11/22 - 14:57**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : SATA Flash Drive	**Probe : Site7_CBL6112_10M_1307 - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1**

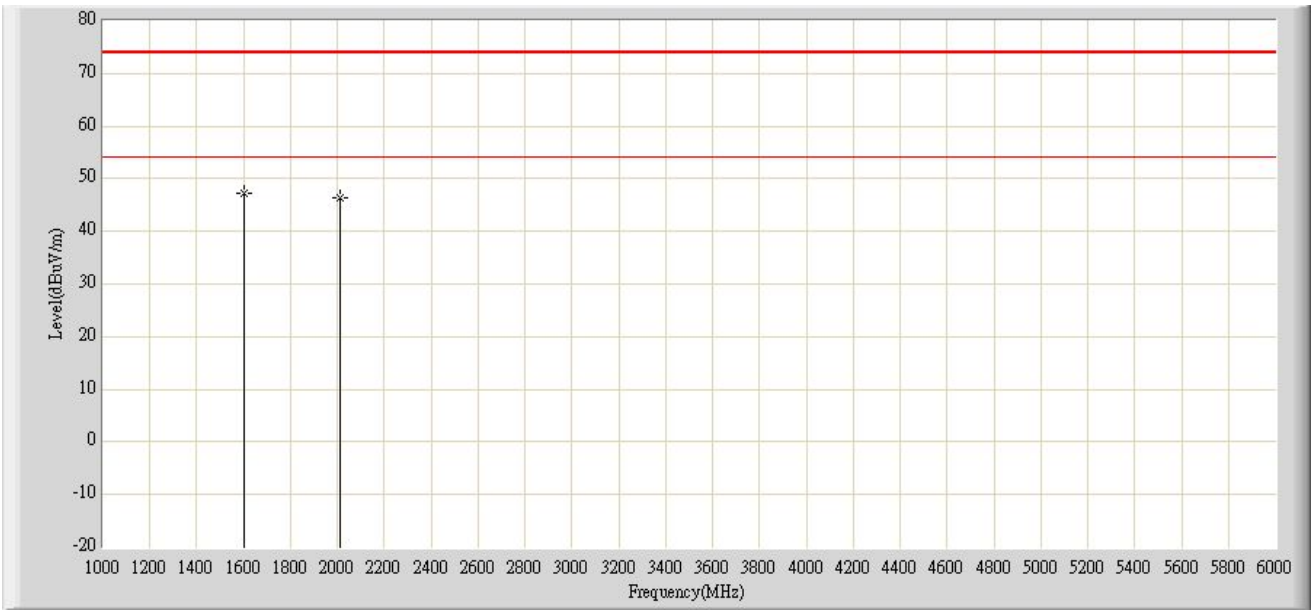


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	169.960	-20.103	41.500	21.397	-8.603	30.000	QUASIPEAK
2		229.000	-18.709	39.800	21.090	-8.910	30.000	QUASIPEAK
3		381.000	-12.125	34.800	22.674	-14.326	37.000	QUASIPEAK
4		443.400	-9.844	38.000	28.156	-8.844	37.000	QUASIPEAK
5		697.200	-6.780	33.900	27.120	-9.880	37.000	QUASIPEAK
6		997.920	-1.832	27.000	25.167	-11.833	37.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site: CB7	**Time: 2013/11/22 - 18:42**
Limit: FCC_B_(Above_1G)	**Margin: 0**
Probe: CB7_Horn_9120D_1302	**Polarity: Horizontal**
EUT: SATA Flash Drive	**Power: AC 120V/60Hz**
Note: Mode 1	

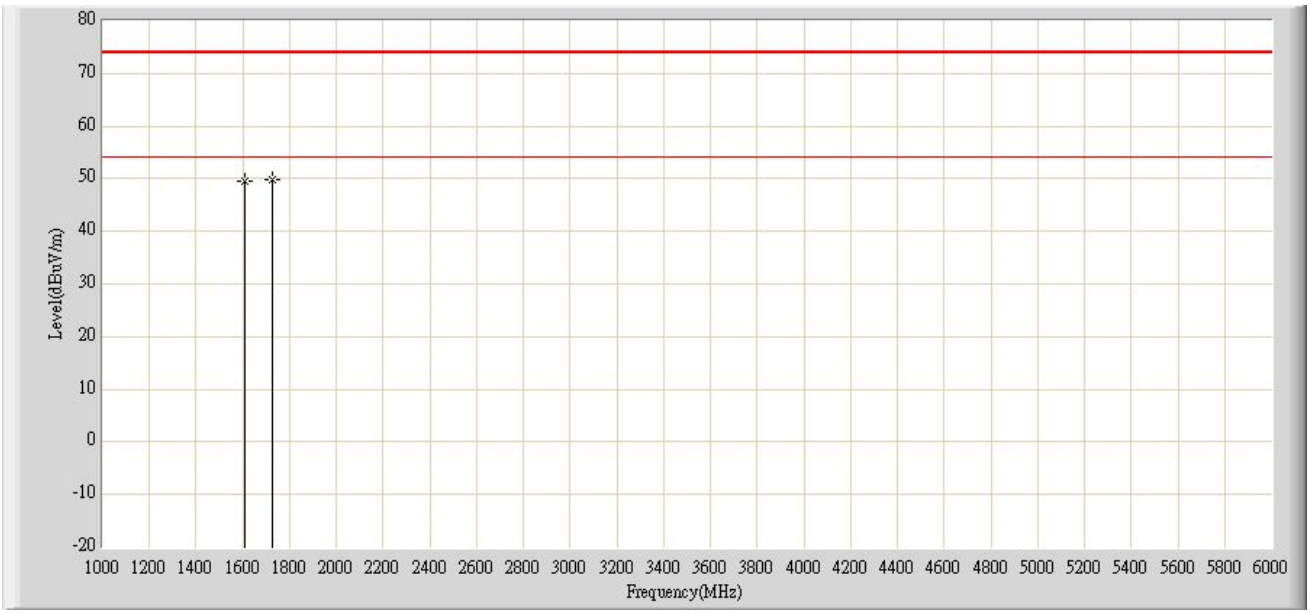


		Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1	*	1600.000	47.266	51.200	-26.734	74.000	-3.934	PK
2		2010.000	46.454	49.300	-27.546	74.000	-2.846	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: CB7	**Time: 2013/11/22 - 18:43**
Limit: FCC_B_(Above_1G)	**Margin: 0**
Probe: CB7_Horn_9120D_1302	**Polarity: Vertical**
EUT: SATA Flash Drive	**Power: AC 120V/60Hz**
Note: Mode 1	



		Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		1610.000	49.511	53.450	-24.489	74.000	-3.939	PK
2	*	1725.000	49.869	53.410	-24.131	74.000	-3.541	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4.6. Test Photograph

Test Mode : Mode 1: Normal Operation

Description : Front View of Radiated Test

Test Mode : Mode 1: Normal Operation

Description : Back View of Radiated Test

Test Mode　: Mode 1: Normal Operation

Description　: Front View of High Frequency Radiated Test

5. Attachment

➢ EUT Photograph

(1) EUT Photo

(2) EUT Photo