

# Test Report

FCC Part15 Subpart B for Receiver Mode

Product Name : Flip Share TV(USB Dangle)

Model No. : CTV1-UB

FCC ID : Q87CTV1UB

Applicant : Cisco Systems, Inc.

Address : 30 Maiden Lane, 6<sup>th</sup> Floor, San Francisco,  
CA94108, USA

Date of Receipt : 2009/08/31

Issued Date : 2009/09/15

Report No. : 098S103R-ITUSP01V01

Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by CNLA, NVLAP or any agency of the Government.  
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# Test Report Certification

Issued Date : 2009/09/15

Report No. : 098S103R-RF-ITUSP01V01



Product Name : Flip Share TV(USB Dangle)  
 Applicant : Cisco Systems, Inc.  
 Address : 30 Maiden Lane, 6th Floor, San Francisco, CA94108,  
 USA  
 Manufacturer : Ambit Microsoft system(shanghai) LTD.  
 Address : No.1925, Nanle road Songjiang Export Processing Zone  
 Shanghai China  
 Model No. : CTV1-UB  
 FCC ID : Q87CTV1UB  
 EUT Voltage : DC 5V  
 Trade Name : Cisco  
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2008  
 ANSI C63.4: 2003  
 Test Result : Complied  
 Performed Location : SuZhou EMC 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  
 FCC Registration Number: 800392

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 ( Marlin Chen )

Approved By : Gene Chang  
 ( Gene Chang )

## 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 by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	: BSMI, DGT, CNLA
Germany	: TUV Rheinland
Norway	: Nemko, DNV
USA	: FCC, NVLAP
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://tw.quietek.com/modules/myalbum/>  
 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:

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**1. General Information****1.1. EUT Description**

Product Name	Flip Share TV(USB Dangle)
Trade Name	Cisco
Model No.	CTV1-UB
FCC ID	Q87CTV1UB

**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:

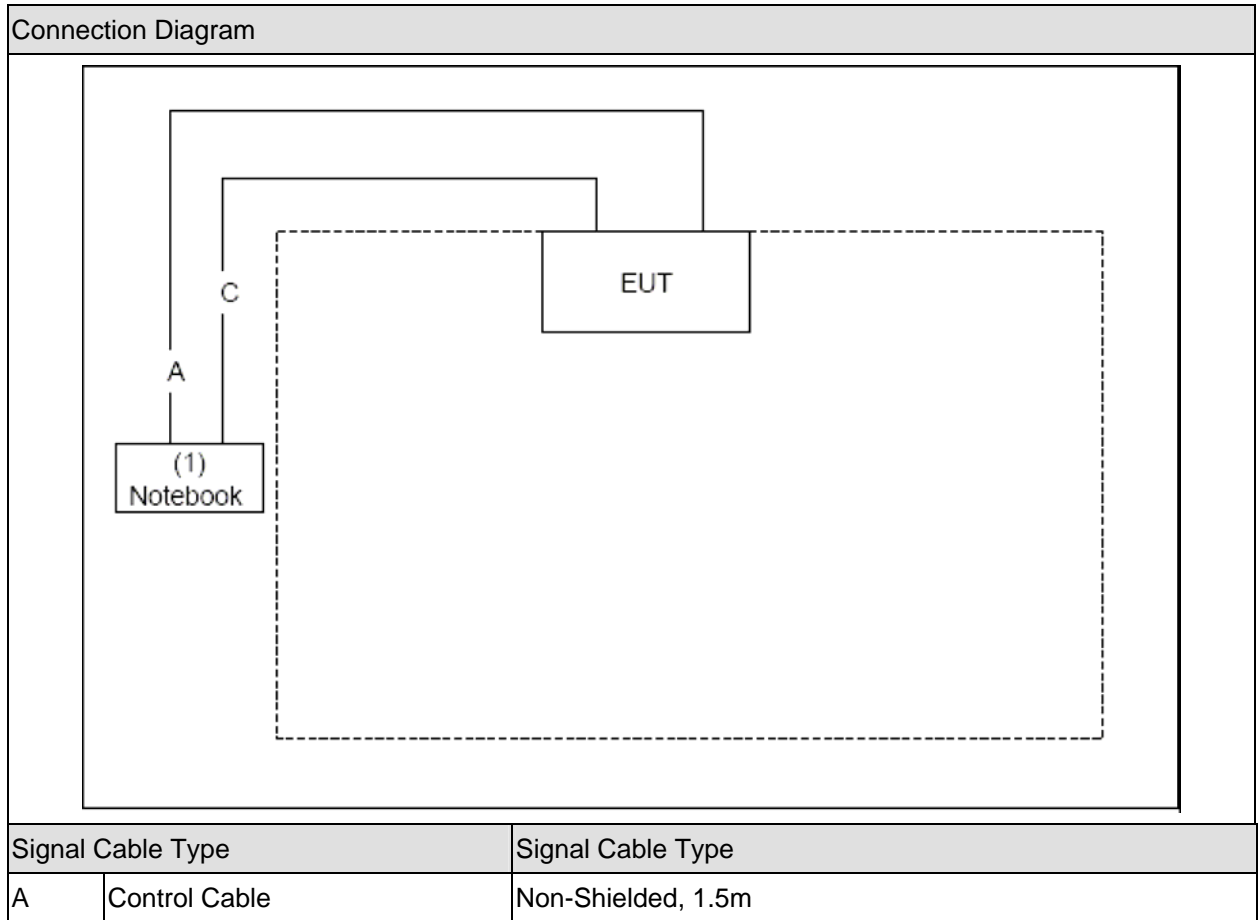
Final Test Mode
Mode 1: Normal Operation

**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	Notebook	DELL	PP19L	JH097 A01	Power by adapter

1.4. Configuration of Tested System





**1.5. EUT Exercise Software**

1	Setup the EUT and simulators as shown on above
2	Turn on the power of equipment.
3	Open the software "RT3x7xQA", then select the Receive mode , test channel and start test.

**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 Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart B: 2008 Class B ANSI C63.4: 2003	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart B: 2008 Class B ANSI C63.4: 2003	Yes	No

## 2.2. List of Test Equipment

### Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCI	100726	2009/04/23
Two-Line V-Network	R&S	ENV216	100013	2009/06/11
Two-Line V-Network	R&S	ENV216	100014	2008/06/28
Balanced Telecom ISN	Fischer	FCC-TLISN-T2-02	20352	2009/02/03
Balanced Telecom ISN	Fischer	FCC-TLISN-T4-02	20353	2009/02/03
Balanced Telecom ISN	Fischer	FCC-TLISN-T8-02	20354	2009/02/03
Current Probe	R&S	EZ-17	100255	2009/04/18
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2008/11/24
50ohm Termination	SHX	TF2	07081401	2008/09/28
50ohm Termination	SHX	TF2	07081402	2008/09/28
50ohm Termination	SHX	TF2	07081403	2008/09/28
Coaxial Cable	Luthi	RG214	519358	2008/11/24
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2009/03/31

### Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4408B	MY45102679	2008/06/28
EMI Test Receiver	R&S	ESCI	100573	2009/05/10
Preamplifier	Quietek	AP-025C	QT-AP003	2008/11/24
Preamplifier	Quietek	AP-180C	CHM-0602012	2008/11/24
Bilog Type Antenna	Schaffner	CBL6112B	2932	2008/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2008/11/24
50ohm Coaxial Switch	Anritsu	MP59B	6200447304	2008/11/24
Coaxial Cable	Huber+Suhner	AC2-C	04	2008/11/24
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2009/03/31

### **2.3. Measurement Uncertainty**

#### Conducted Emission

The measurement uncertainty is evaluated as  $\pm 2.26$  dB.

#### Radiated Emission

The measurement uncertainty is evaluated as  $\pm 3.19$  dB.

**2.4. Test Environment**

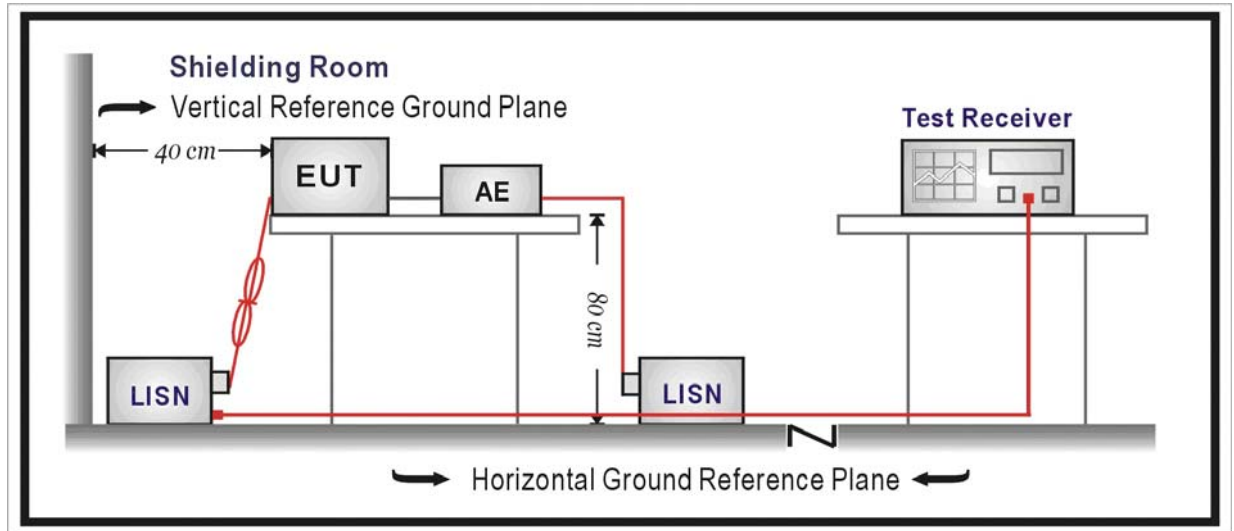
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	47
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	28
	Humidity (%RH)	25-75	46
	Barometric pressure (mbar)	860-1060	950-1000

### 3. Conducted Emission

#### 3.1. Test Specification

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

#### 3.2. Test Setup



#### 3.3. Limit

FCC Part 15 Subpart B Paragraph 15.107 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

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

#### 3.4. Test Procedure

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the

EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

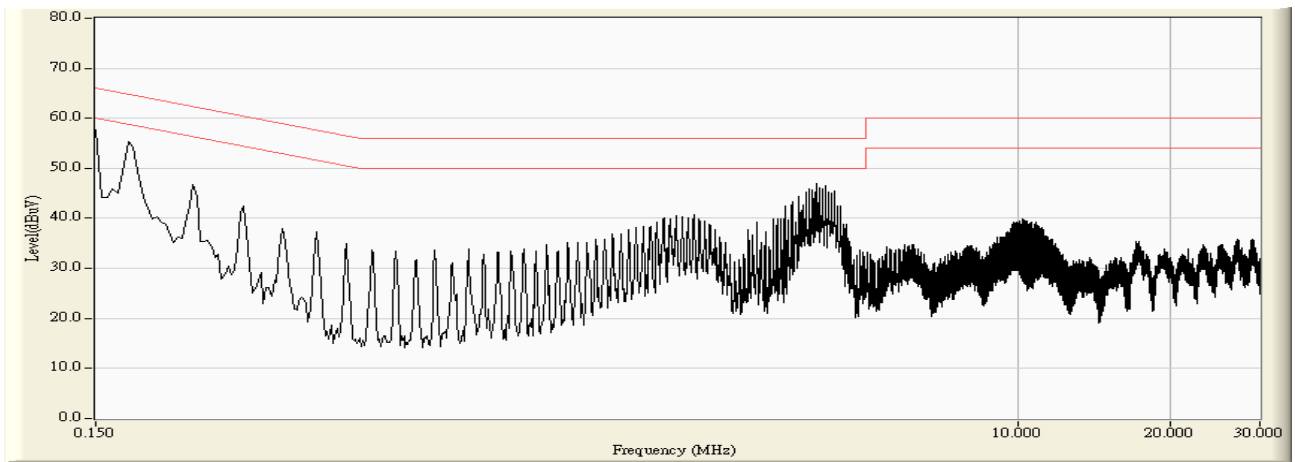
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

### **3.5. Deviation from Test Standard**

No deviation.

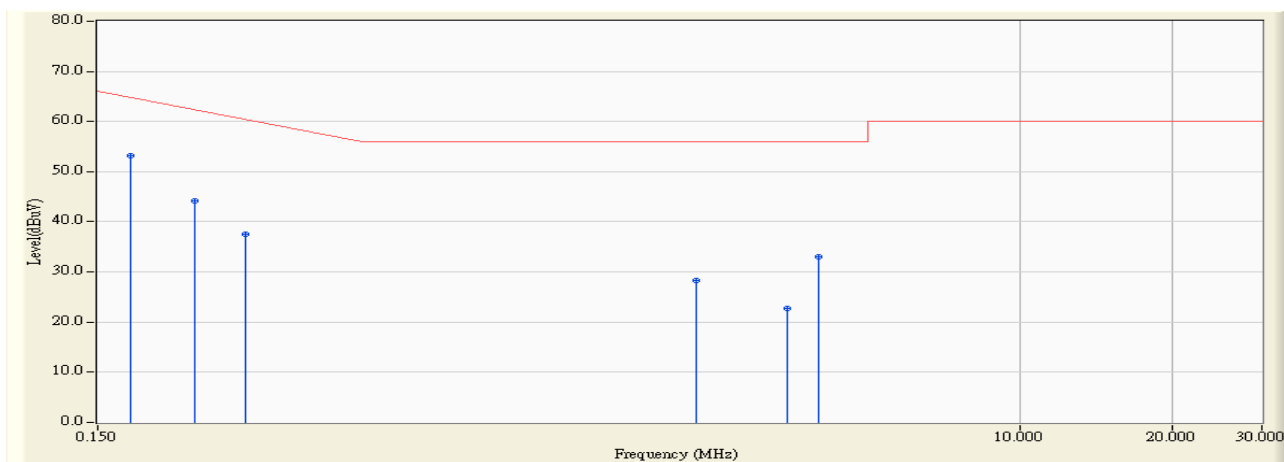
**3.6. Test Result**

Engineer : Cryst	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	Time : 2009/09/12 - 13:41
Limit : FCC_PARTB_15.107_00M_QP	Margin : 6
Probe : ENV216_100014(0.009-30MHz) - Line1	Power : AC 120V/60Hz
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



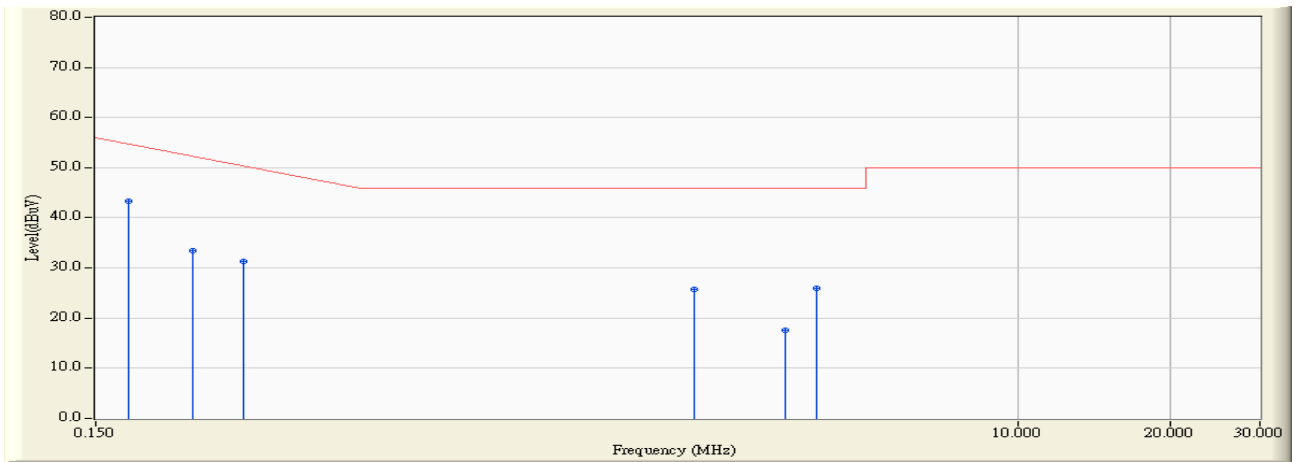


Engineer : Cryst	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	Time : 2009/09/12 - 13:46
Limit : FCC_PARTB_15.107_00M_QP	Margin : 0
Probe : ENV216_100014(0.009-30MHz) - Line1	Power : AC 120V/60Hz
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



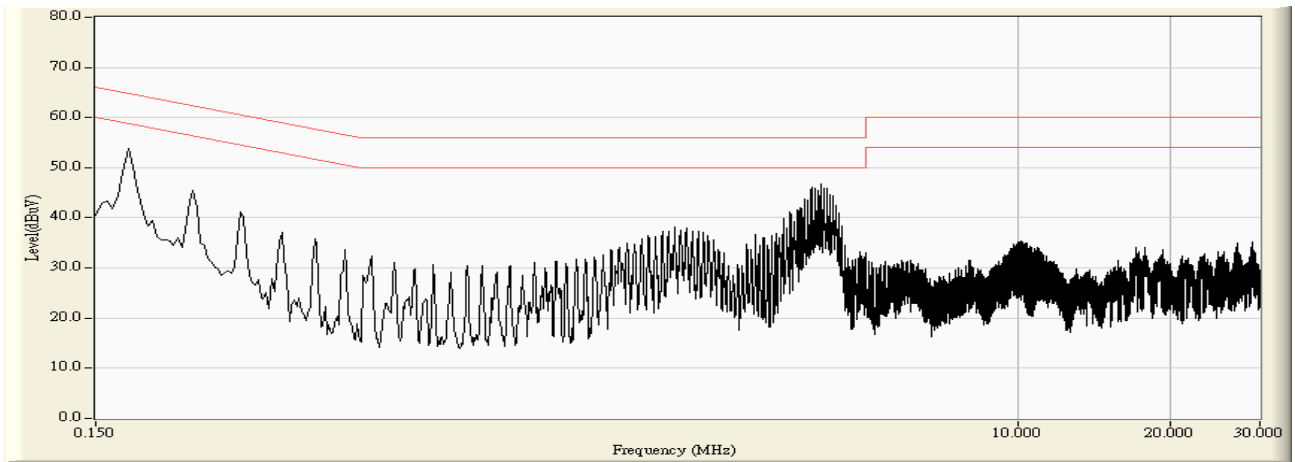
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.174	9.929	43.200	53.129	-11.638	64.767	QUASPEAK
2		0.234	9.450	34.800	44.250	-18.057	62.307	QUASPEAK
3		0.294	9.498	28.000	37.498	-22.913	60.411	QUASPEAK
4		2.282	9.708	18.600	28.308	-27.692	56.000	QUASPEAK
5		3.450	9.780	13.000	22.780	-33.220	56.000	QUASPEAK
6		3.978	9.813	23.200	33.013	-22.987	56.000	QUASPEAK

Engineer : Cryst	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	Time : 2009/09/12 - 13:46
Limit : FCC_PARTB_15.107_00M_AV	Margin : 0
Probe : ENV216_100014(0.009-30MHz) - Line1	Power : AC 120V/60Hz
EUT : Flip Share TV(USB Dangle)	Note : Mode 1

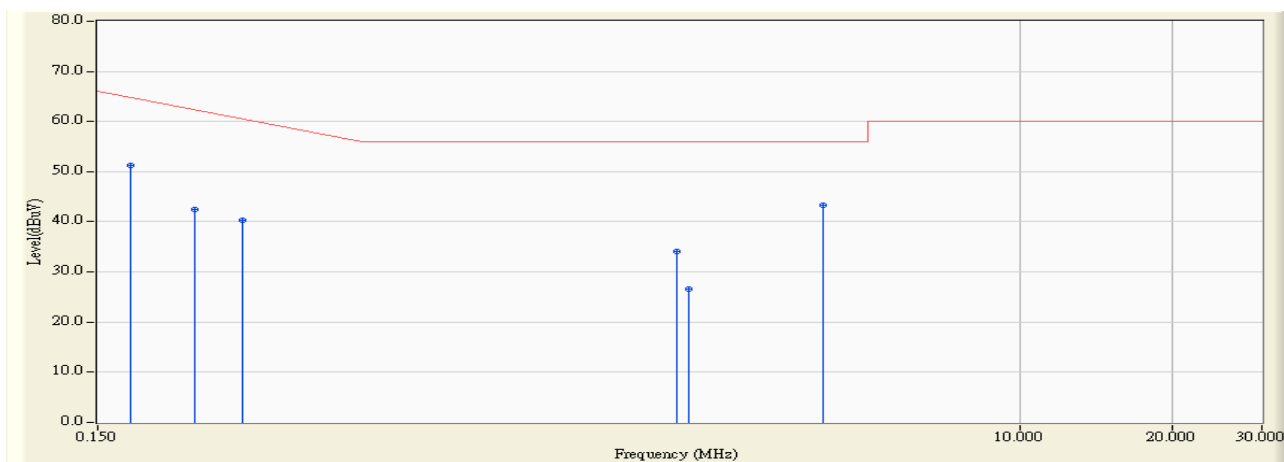


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.174	9.929	33.500	43.429	-11.338	54.767	AVERAGE
2		0.234	9.450	24.100	33.550	-18.757	52.307	AVERAGE
3		0.294	9.498	21.900	31.398	-19.013	50.411	AVERAGE
4		2.282	9.708	16.000	25.708	-20.292	46.000	AVERAGE
5		3.450	9.780	7.700	17.480	-28.520	46.000	AVERAGE
6		3.978	9.813	16.100	25.913	-20.087	46.000	AVERAGE

Engineer : Cryst	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	Time : 2009/09/12 - 14:01
Limit : FCC_PARTB_15.107_00M_QP	Margin : 6
Probe : ENV216_100014(0.009-30MHz) – Line 2	Power : AC 120V/60Hz
EUT : Flip Share TV(USB Dangle)	Note : Mode 1

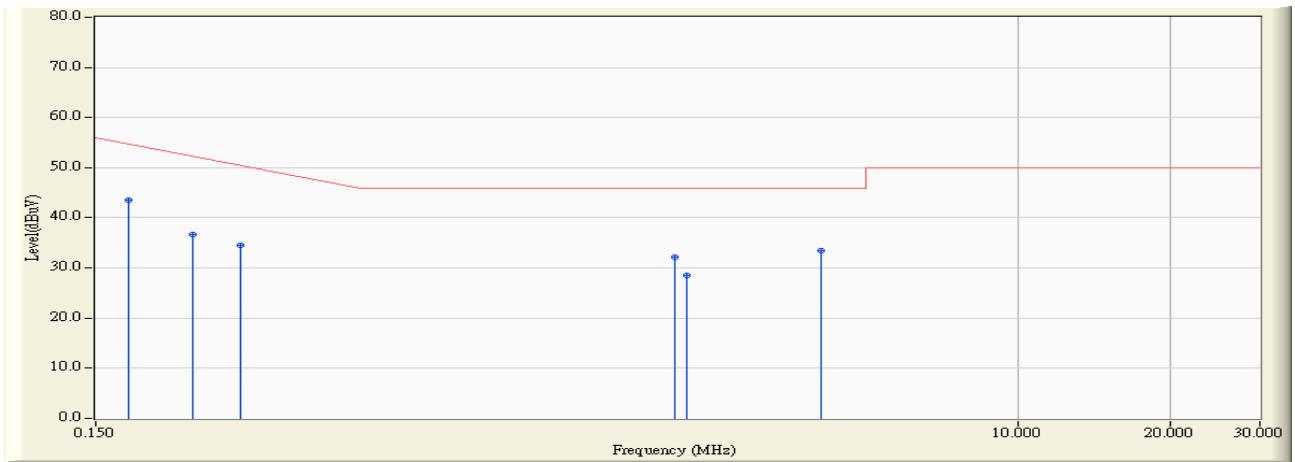


Engineer : Cryst	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	Time : 2009/09/12 - 14:04
Limit : FCC_PARTB_15.107_00M_QP	Margin : 0
Probe : ENV216_100014(0.009-30MHz) - Line 2	Power : AC 120V/60Hz
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.174	9.929	41.400	51.329	-13.438	64.767	QUASPEAK
2		0.234	9.450	33.000	42.450	-19.857	62.307	QUASPEAK
3		0.290	9.494	30.800	40.294	-20.230	60.524	QUASPEAK
4		2.090	9.684	24.400	34.084	-21.916	56.000	QUASPEAK
5		2.210	9.700	16.800	26.500	-29.500	56.000	QUASPEAK
6	*	4.062	9.820	33.600	43.420	-12.580	56.000	QUASPEAK

Engineer : Cryst	
Site : SR-1 (Conducted Emission and Power Disturbance Test)	Time : 2009/09/12 - 14:04
Limit : FCC_PARTB_15.107_00M_AV	Margin : 0
Probe : ENV216_100014(0.009-30MHz) - Line 2	Power : AC 120V/60Hz
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.174	9.929	33.600	43.529	-11.238	54.767	AVERAGE
2		0.234	9.450	27.300	36.750	-15.557	52.307	AVERAGE
3		0.290	9.494	25.100	34.594	-15.930	50.524	AVERAGE
4		2.090	9.684	22.500	32.184	-13.816	46.000	AVERAGE
5		2.210	9.700	18.900	28.600	-17.400	46.000	AVERAGE
6		4.062	9.820	23.600	33.420	-12.580	46.000	AVERAGE

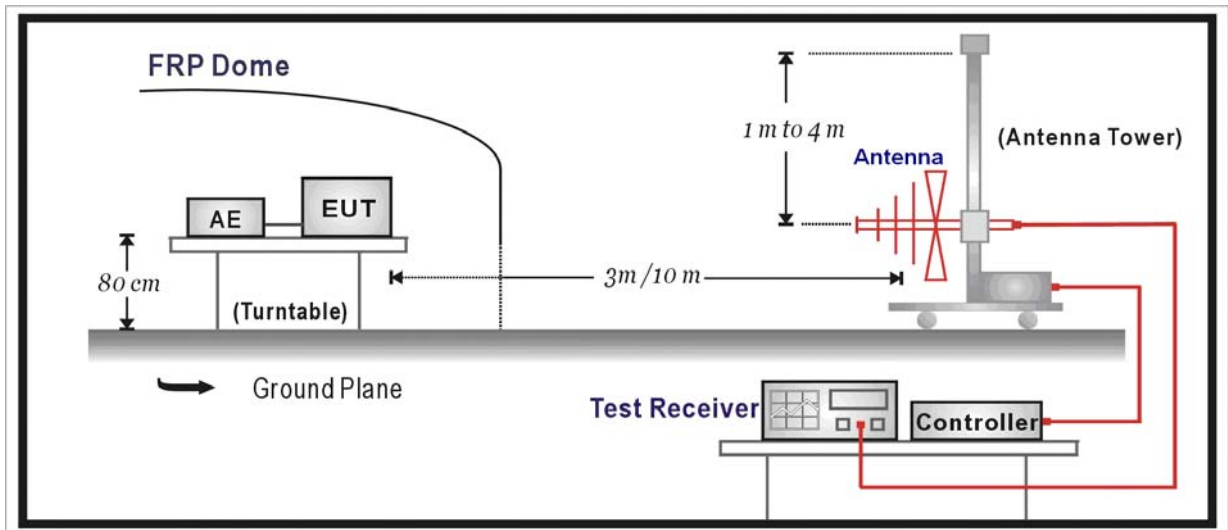
**4. Radiated Emission**

**4.1. Test Specification**

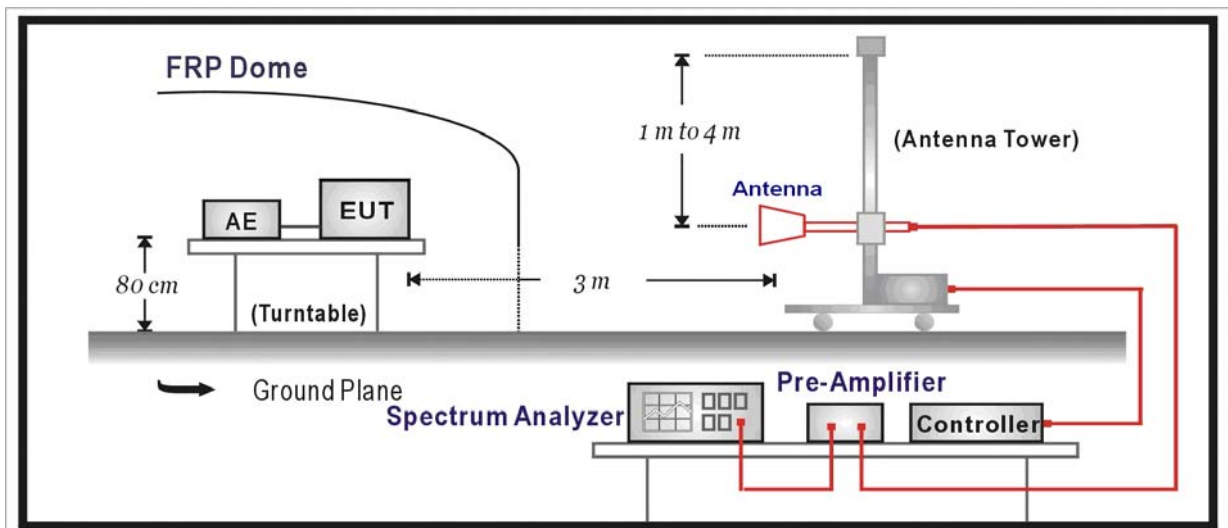
According to EMC Standard: FCC Part 15 Subpart B Class B, ANSI C63.4

**4.2. Test Setup**

Below 1GHz Test Setup:



Above 1GHz Test Setup:



**4.3. Limit**

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

Note 1: The lower limit shall apply at the transition frequency.

Note 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.

Note 3: E field strength (dBuV/m) = 20 log E field strength (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. The EUT was positioned such that the distance from antenna to the EUT was 10 meters. 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 following 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	5th 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 ESCI) is 120 kHz and above 1GHz is 1MHz.

Note: When measurement above 1GHz, the horn antenna will bend down a little (as horn antenna have the narrow beamwidth) in order to find the maximum emission of EUT.

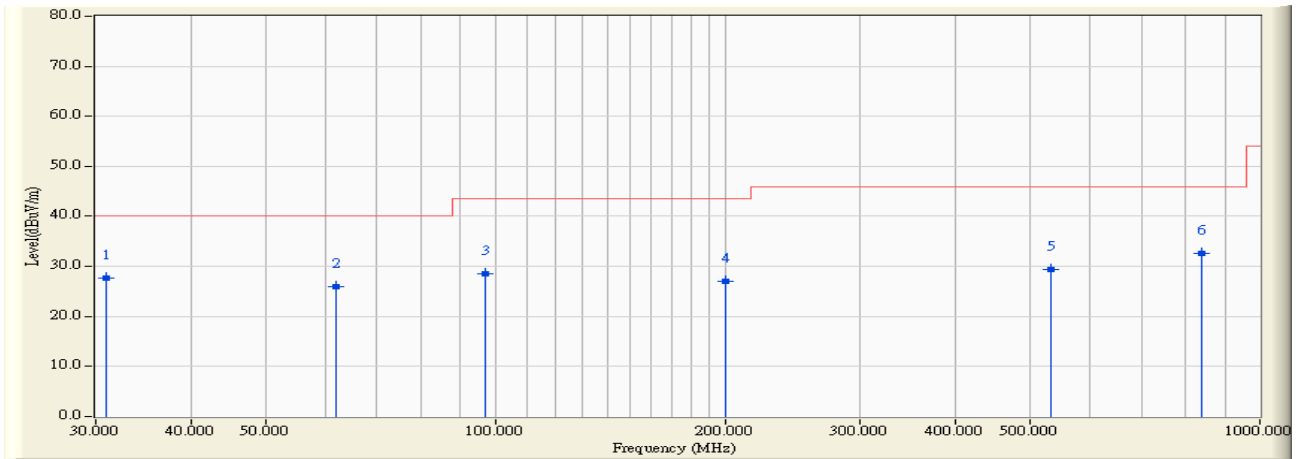
**4.5. Deviation from Test Standard**

No deviation.



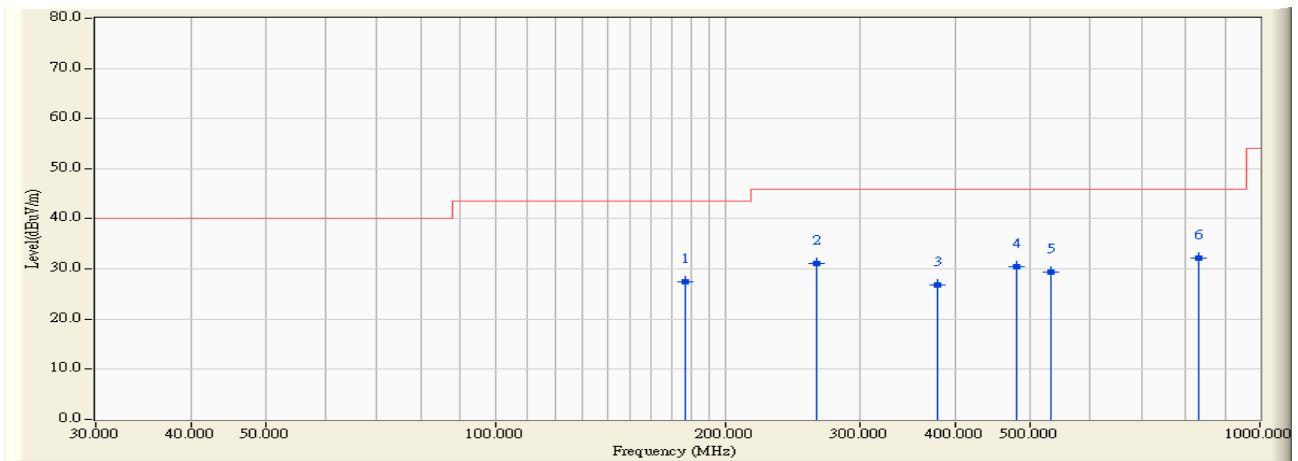
## 4.6. Test Result

Engineer : Cryst	
Site : AC-3 (3m Semi-Anechoic Chamber)	Time : 2009/09/12 - 14:47
Limit : FCC_SPARTB_15.109_03M_QP	Margin : 0
Probe : CBL6112D_27613(30-1000MHz) - HORIZONTAL	Power : AC 120V/60HZ
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



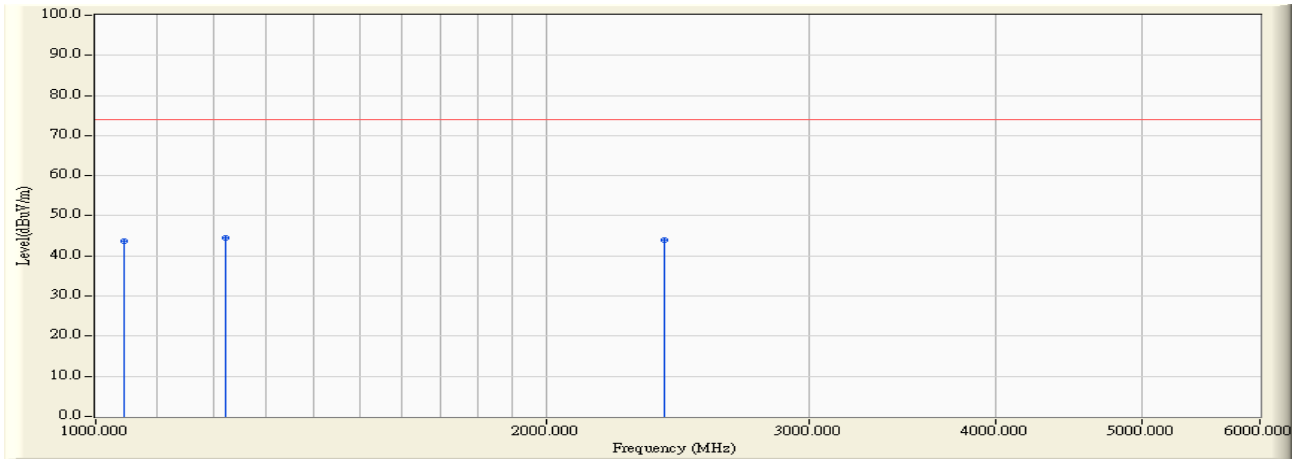
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	*	30.965	17.931	9.785	27.716	-12.284	40.000	QUASIPeAK	102.500	246.700
2		61.994	5.870	20.149	26.019	-13.981	40.000	QUASIPeAK	118.400	128.400
3		96.885	10.721	17.825	28.546	-14.954	43.500	QUASIPeAK	128.700	249.400
4		200.175	9.792	17.284	27.076	-16.424	43.500	QUASIPeAK	112.000	156.700
5		532.115	19.215	10.248	29.463	-16.537	46.000	QUASIPeAK	100.300	217.800
6		839.555	22.366	10.228	32.594	-13.406	46.000	QUASIPeAK	105.400	275.000

Engineer : Cryst	
Site : AC-3 (3m Semi-Anechoic Chamber)	Time : 2009/09/12 - 14:52
Limit : FCC_SPARTB_15.109_03M_QP	Margin : 0
Probe : CBL6112D_27613(30-1000MHz) - VERTICAL	Power : AC 120V/60HZ
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



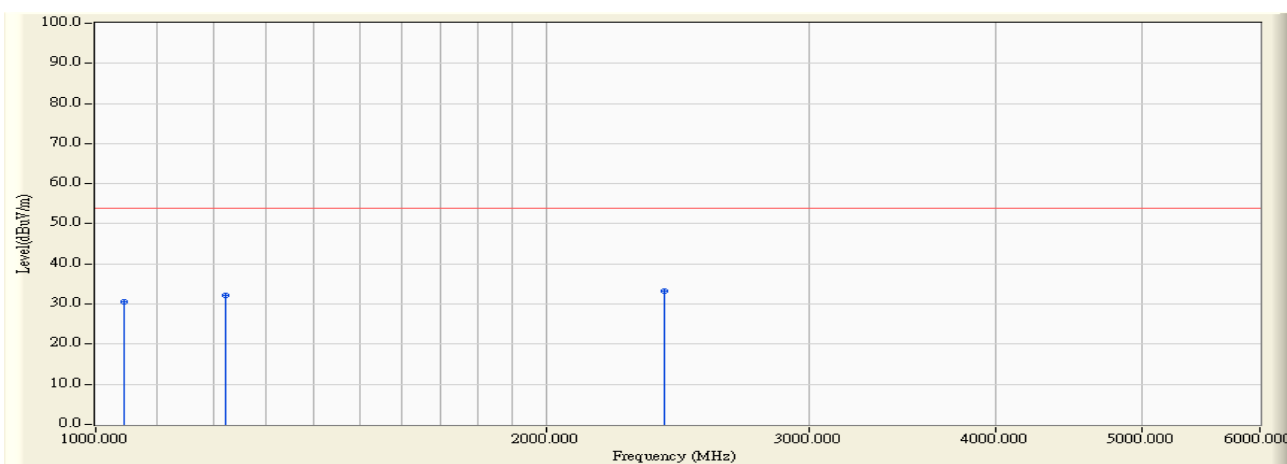
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		176.825	9.290	18.245	27.535	-15.965	43.500	QUASIPeAK	126.300	224.000
2		263.665	13.888	17.189	31.077	-14.923	46.000	QUASIPeAK	105.400	218.900
3		378.125	16.533	10.246	26.779	-19.221	46.000	QUASIPeAK	122.000	249.000
4		479.825	18.304	12.227	30.532	-15.468	46.000	QUASIPeAK	158.700	229.400
5		533.155	19.292	9.985	29.277	-16.723	46.000	QUASIPeAK	100.900	248.700
6	*	832.755	22.206	10.028	32.234	-13.766	46.000	QUASIPeAK	109.300	274.100

Engineer : Cryst	
Site : AC-5 (3m Semi-Anechoic Chamber)	Time : 2009/09/12 - 15:48
Limit : FCC_B_(Above_1G)_03M_PK	Margin : 0
Probe : 9120D_499(1-18GHz) - HORIZONTAL	Power : AC 120V/60HZ
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



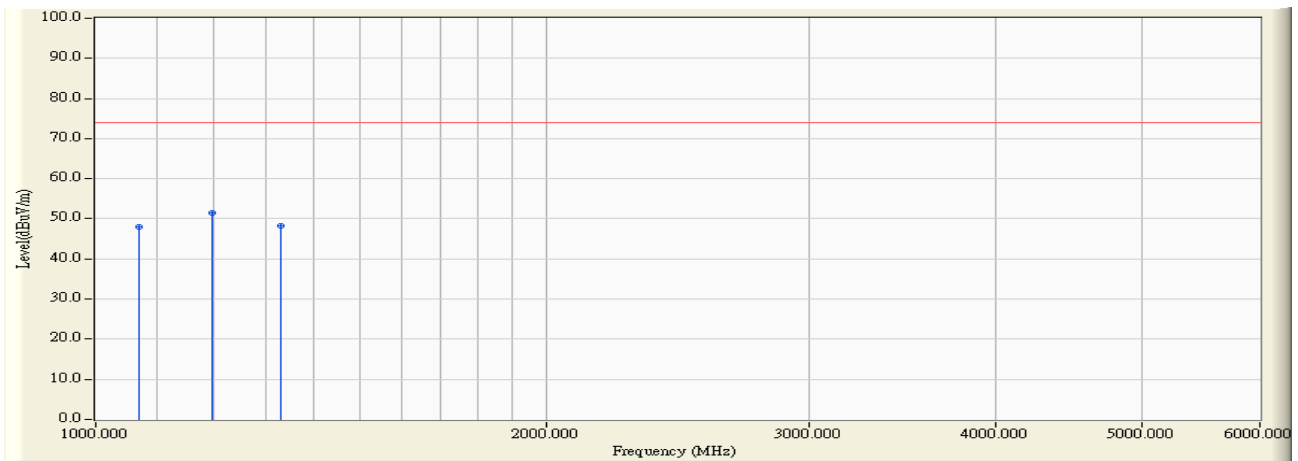
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		1045.000	-10.428	54.224	43.796	-30.204	74.000	PEAK	0.000	0.000
2	*	1220.000	-10.018	54.462	44.443	-29.557	74.000	PEAK	0.000	0.000
3		2400.000	-5.656	49.569	43.913	-30.087	74.000	PEAK	0.000	0.000

Engineer : Cryst	
Site : AC-5 (3m Semi-Anechoic Chamber)	Time : 2009/09/12 - 15:48
Limit : FCC_B_(Above_1G)_03M_AV	Margin : 0
Probe : 9120D_499(1-18GHz) - HORIZONTAL	Power : AC 120V/60HZ
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



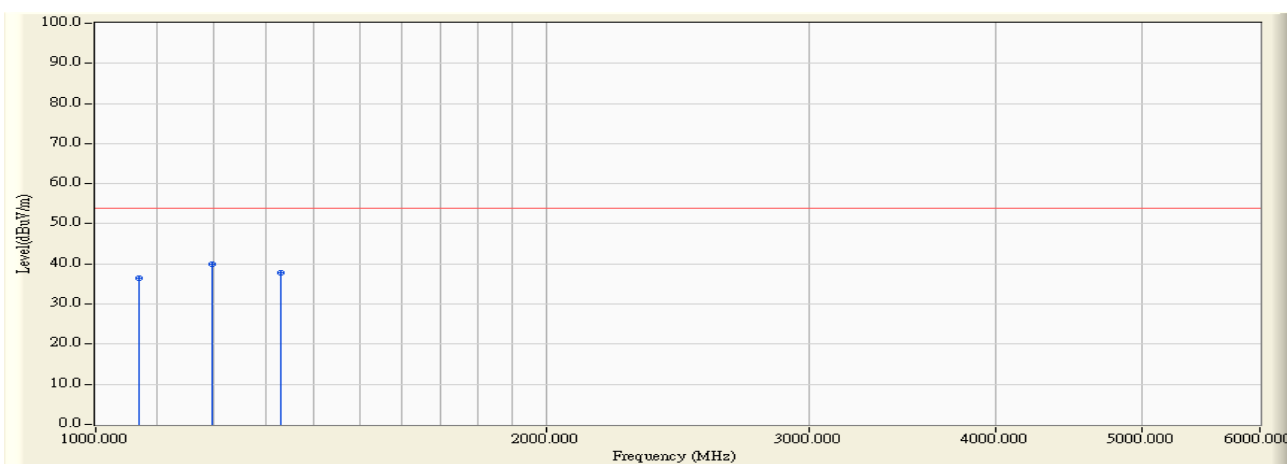
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	1045.125	-10.428	41.025	30.597	-23.403	54.000	AVERAGE	102.400	254.600
2	1221.015	-10.013	42.117	32.104	-21.896	54.000	AVERAGE	100.800	245.700
3	* 2399.785	-5.656	38.925	33.268	-20.732	54.000	AVERAGE	127.400	249.500

Engineer : Cryst	
Site : AC-5 (3m Semi-Anechoic Chamber)	Time : 2009/09/12 - 15:48
Limit : FCC_B_(Above_1G)_03M_PK	Margin : 0
Probe : 9120D_499(1-18GHz) - VERTICAL	Power : AC 120V/60HZ
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	1070.000	-10.391	58.371	47.980	-26.020	74.000	PEAK	0.000	0.000
2	* 1195.000	-10.139	61.635	51.496	-22.504	74.000	PEAK	0.000	0.000
3	1330.000	-9.299	57.540	48.242	-25.758	74.000	PEAK	0.000	0.000

Engineer : Cryst	
Site : AC-5 (3m Semi-Anechoic Chamber)	Time : 2009/09/12 - 15:49
Limit : FCC_B_(Above_1G)_03M_AV	Margin : 0
Probe : 9120D_499(1-18GHz) - VERTICAL	Power : AC 120V/60HZ
EUT : Flip Share TV(USB Dangle)	Note : Mode 1



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	1070.025	-10.391	46.985	36.594	-17.406	54.000	AVERAGE	102.400	244.700
2	* 1194.885	-10.139	50.149	40.010	-13.990	54.000	AVERAGE	100.700	128.900
3	1330.145	-9.298	47.112	37.814	-16.186	54.000	AVERAGE	108.400	255.600