

# FCC REPORT

**Applicant:** HUAWEI TECHNOLOGIES CO.,LTD.

**Address of Applicant:** Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

**Equipment Under Test (EUT)**

Product Name: Laptop Docking

Model No.: S10-D01

**FCC ID:** QISS10-D01

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart B: 2010

**Date of sample receipt:** 27 Jul., 2012

**Date of Test:** 27 to 28 Jul., 2012

**Date of report issued:** 30 Jul., 2012

**Test Result :** Pass \*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Authorized Signature:

Bruce Zhang  
Laboratory Manager

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 and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

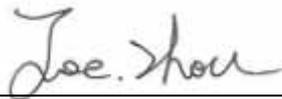
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This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only."

## 2 Version

Version No.	Date	Description
00	30 Jul., 2012	Original

**Prepared By:**

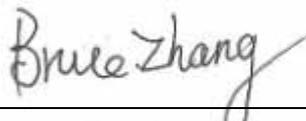


**Project Engineer**

**Date:**

30 Jul., 2012

**Check By:**



**Reviewer**

**Date:**

30 Jul., 2012

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## 4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part15.107	Pass
Radiated Emissions	Part15.109	Pass

*Pass: The EUT complies with the essential requirements in the standard.*

## 5 General Information

### 5.1 Client Information

Applicant:	Huawei Technologies Co., Ltd.
Address of Applicant:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C
Manufacturer:	Huawei Technologies Co., Ltd.
Address of Manufacturer/	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C
Factory:	HUIZHOU BYD ELECTRONIC CO.,LTD.
Address of Factory:	Xiangshui River,Economic Development Zone,Daya Bay, Huizhou,Guangdong,516083,P.R.China

### 5.2 General Description of E.U.T.

Product Name:	Laptop Docking
Model No.:	S10-D01
Test voltage:	AC 120V/ 60Hz
The highest frequency of the internal sources of EUT : 24MHz	

### 5.3 Operating Modes

Operating mode	Detail description
Charging & Data exchange	Keep the EUT in data exchange with u-disk by USB port
Charging & Keyboard entry	Keep the EUT in keyboard entry mode

### 5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
Huawei	Laptop	S10-101u	N/A	FCC ID
HOOK	Udisk	PNY	N/A	DoC
HP	Printer	HP LaserJet P1007	NVNFN746953	DoC
DELL	PC	OPTIPLEX 745	N/A	DoC
DELL	Monitor	E2210c	CN-0NYCRV-64180-19G-OKDM	DoC

### 5.5 Deviation from Standards

None
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### 5.6 Abnormalities from Standard Conditions

None.
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## 5.7 Other Information Requested by the Customer

None.

## 5.8 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

**FCC —Registration No.: 817957**

China Certification & Inspection Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012

**Industry Canada (IC)**

The 3m Semi-anechoic chamber of China Certification & Inspection Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

## 5.9 Test Location

All tests were performed at:

China Certification & Inspection Services Co., Ltd.

Address: 1st Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China

Tel: 0755-23118282

Fax: 0755-23116366

## 6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	Aug. 09 2012	Aug. 09 2013
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	June 16 2012	June 16 2013
3	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	June 09 2012	June 09 2013
4	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	June 09 2012	June 09 2013
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Coaxial Cable	CCIS	N/A	CCIS0016	Mar. 01 2012	Mar. 01 2013
7	Coaxial Cable	CCIS	N/A	CCIS0017	Mar. 01 2012	Mar. 01 2013
8	Coaxial cable	CCIS	N/A	CCIS0018	Mar. 01 2012	Mar. 01 2013
9	Coaxial Cable	CCIS	N/A	CCIS0019	Mar. 01 2012	Mar. 01 2013
10	Coaxial Cable	CCIS	N/A	CCIS0087	Mar. 01 2012	Mar. 01 2013
11	Amplifier(10KHz-1.3GHz)	HP	8447D	CCIS0003	Aug. 03 2012	Aug. 03 2013
12	Amplifier(1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	Aug. 05 2012	Aug. 05 2013
13	Spectrum analyzer	Rohde & Schwarz	FSP	CCIS0023	June 22 2012	June 22 2013
14	EMI Test Receiver	Rohde & Schwarz	ECSI	CCIS0002	June16 2012	June 16 2013
15	Printer	Hp	HP LaserJet P1007	N/A	N/A	N/A

Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	June 09 2012	June 09 2013
2	EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	Apr 01 2012	Apr 01 2013
3	LISN	CHASE	MN2050D	CCIS0074	Apr 01 2012	Apr 01 2013
4	Coaxial Cable	CCIS	N/A	CCIS0086	Apr. 01 2012	Apr. 01 2013
5	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	June 09 2012	June 09 2013

## 7 Test results and Measurement Data

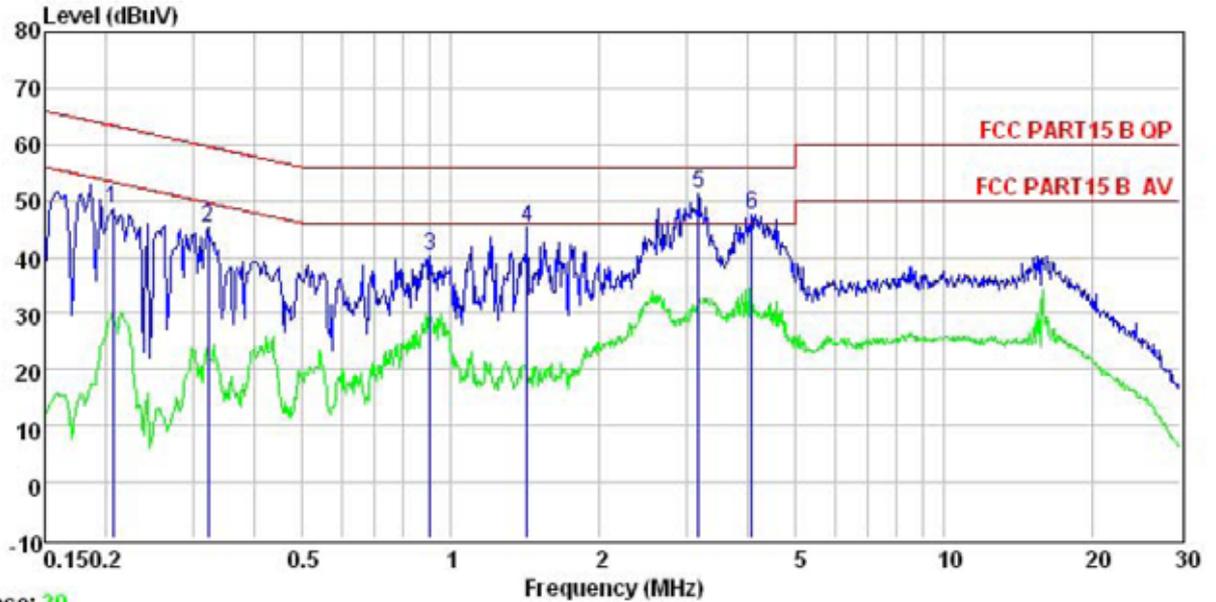
### 7.1 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107														
Test Method:	ANSI C63.4:2003														
Test Frequency Range:	150kHz to 30MHz														
Class / Severity:	Class B														
Receiver setup:	RBW=9kHz, VBW=30kHz														
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dB<math>\mu</math>V)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>0.5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table>	Frequency range (MHz)	Limit (dB $\mu$ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	0.5-30	60	50
Frequency range (MHz)	Limit (dB $\mu$ V)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
0.5-30	60	50													
Test setup:	<p><i>Remark</i>  <i>E.U.T: Equipment Under Test</i>  <i>LISN: Line Impedance Stabilization Network</i>  <i>Test table height=0.8m</i></p>														
Test procedure	<ol style="list-style-type: none"> <li>1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>2. 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).</li> <li>3. 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 according to ANSI C63.4: 2003 on conducted measurement.</li> </ol>														
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar														
Measurement Record:	Uncertainty: 3.28dB														
Test Instruments:	Refer to section 6 for details														
Test mode:	Refer to section 5.3 for details														
Test results:	Pass														

**Measurement data:**

Charging & Data exchange:

Line:

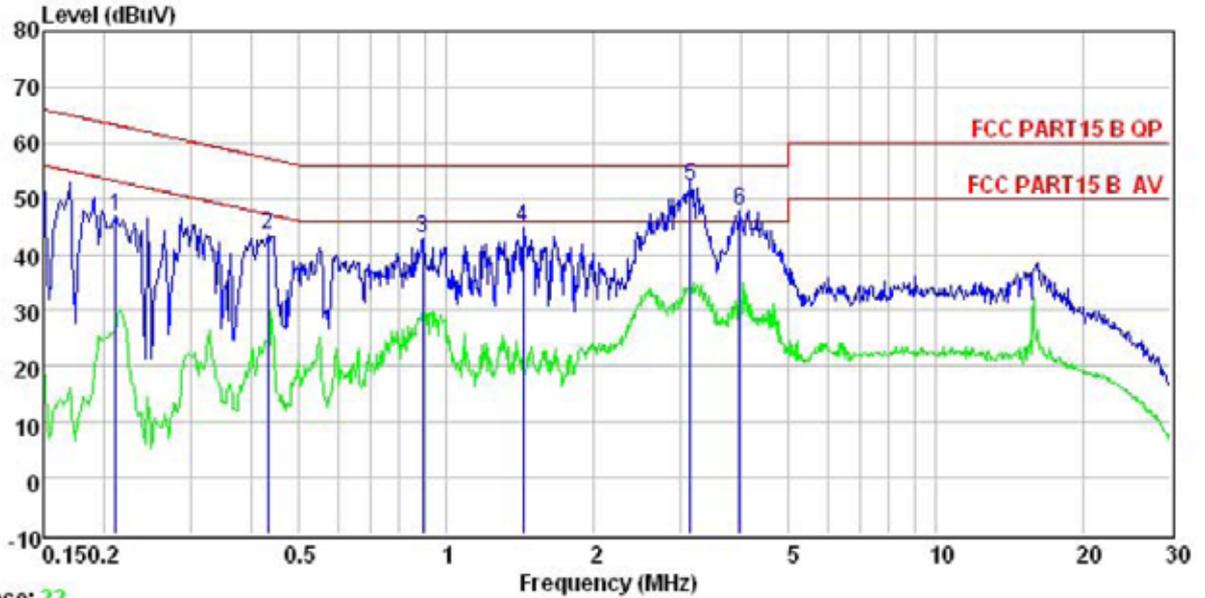


Trace: 20

Site : CCIS Conducted Test Site  
 Condition : FCC PART15 B QP LISN LINE  
 Job NO. : 117IT  
 Test Mode : Downloading Pad USB  
 Test Engineer: Joe

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.206	37.58	10.21	0.76	48.55	63.36	-14.81	QP
2	0.322	34.08	10.27	0.74	45.09	59.66	-14.57	QP
3	0.904	29.24	10.20	0.85	40.29	56.00	-15.71	QP
4	1.426	34.49	10.25	0.44	45.18	56.00	-10.82	QP
5	3.173	40.10	10.29	0.91	51.30	56.00	-4.70	QP
6	4.070	36.34	10.29	0.89	47.52	56.00	-8.48	QP

Neutral:



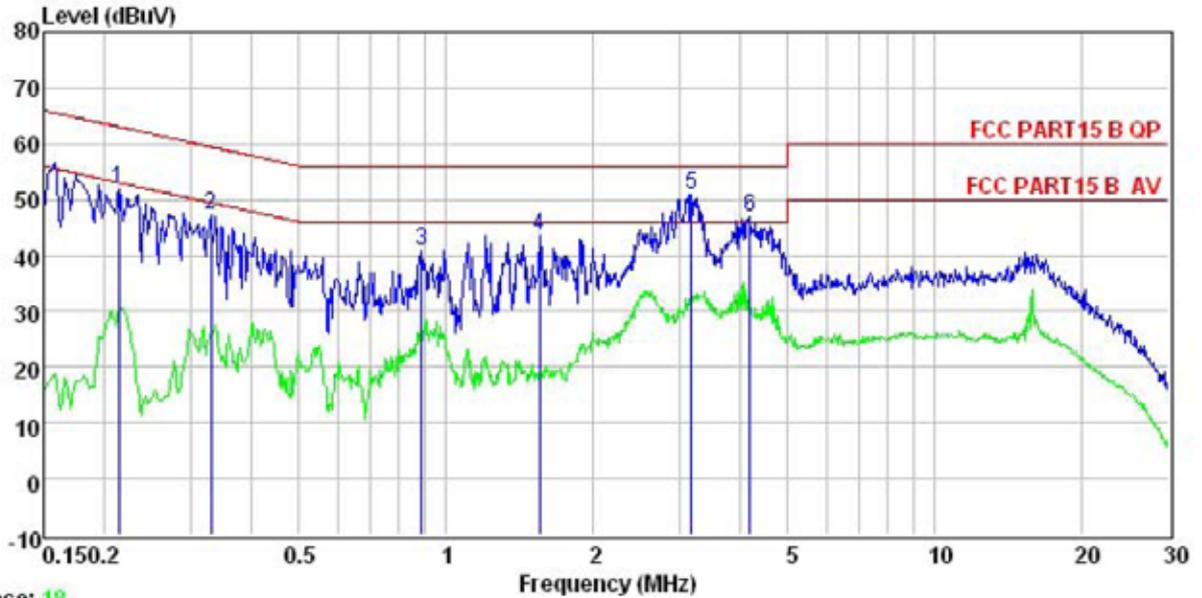
Trace: 22

Site : CCIS Conducted Test Site  
 Condition : FCC PART15 B QP LISN NEUTRAL  
 Job NO. : 117IT  
 Test Mode : Downloading Pad USB  
 Test Engineer: Joe

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.211	36.03	10.23	0.76	47.02	63.18	-16.16	QP
2	0.431	32.47	10.27	0.73	43.47	57.24	-13.77	QP
3	0.894	31.81	10.19	0.85	42.85	56.00	-13.15	QP
4	1.433	34.11	10.24	0.41	44.76	56.00	-11.24	QP
5	3.140	40.91	10.28	0.91	52.10	56.00	-3.90	QP
6	3.964	36.79	10.28	0.89	47.96	56.00	-8.04	QP

Charging & Keyboard entry Mode:

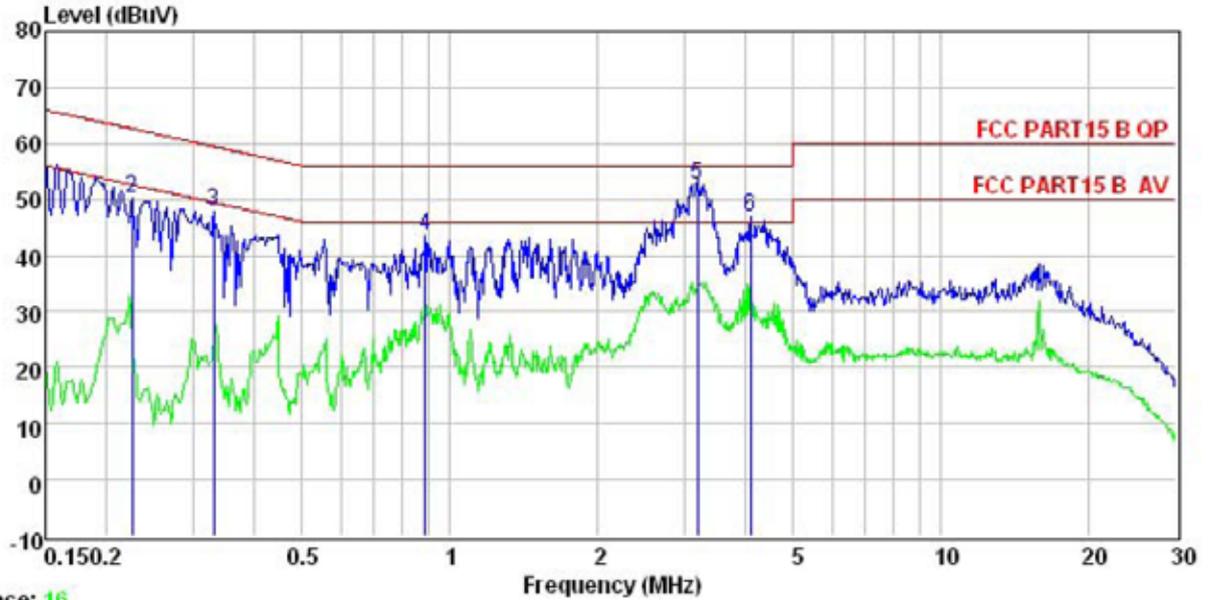
Line:



Trace: 18  
 Site : CCIS Conducted Test Site  
 Condition : FCC PART15 B QP LISN LINE  
 Job NO. : 117IT  
 Test Mode : Writing Mode  
 Test Engineer: Joe

	Read Freq	Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.214	40.89	10.22	0.76	51.87	63.05	-11.18	QP
2	0.330	36.05	10.27	0.73	47.05	59.44	-12.39	QP
3	0.890	29.69	10.20	0.84	40.73	56.00	-15.27	QP
4	1.552	33.11	10.25	0.24	43.60	56.00	-12.40	QP
5	3.173	39.82	10.29	0.91	51.02	56.00	-4.98	QP
6	4.180	35.72	10.29	0.89	46.90	56.00	-9.10	QP

Neutral:



Trace: 16  
 Site : CCIS Conducted Test Site  
 Condition : FCC PART15 B QP LISN NEUTRAL  
 Job NO. : 117IT  
 Test Mode : Writing Mode  
 Test Engineer: Joe

	Read Freq	Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	45.69	10.27	0.79	56.75	66.00	-9.25	QP
2	0.226	39.37	10.23	0.76	50.36	62.61	-12.25	QP
3	0.330	37.06	10.25	0.73	48.04	59.44	-11.40	QP
4	0.890	32.36	10.19	0.84	43.39	56.00	-12.61	QP
5	3.190	41.38	10.28	0.91	52.57	56.00	-3.43	QP
6	4.092	35.65	10.28	0.89	46.82	56.00	-9.18	QP

## 7.2 Radiated Emission

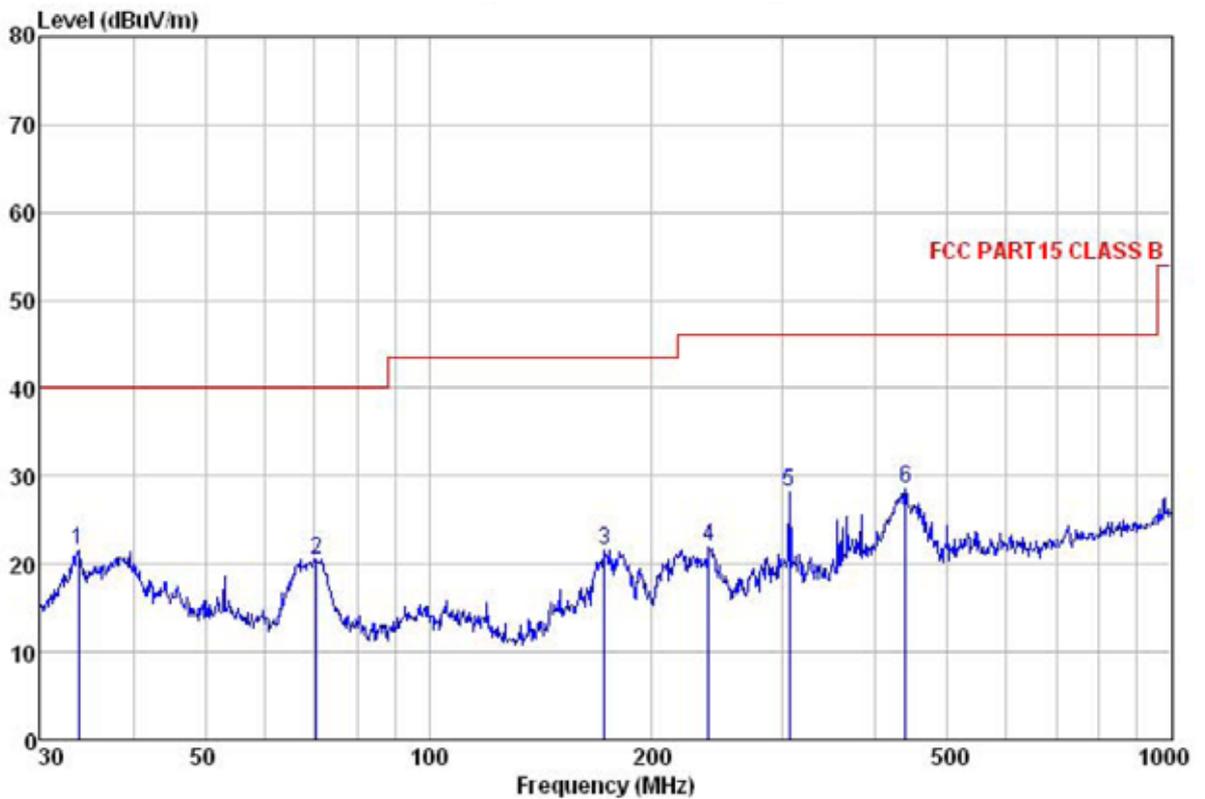
Test Requirement:	FCC Part15 B Section 15.109				
Test Method:	ANSI C63.4:2003				
Test Frequency Range:	30MHz to 1000MHz				
Remark:	The highest internal sources frequency of EUT is 24 MHz, so the test frequency range is 30MHz~1000MHz.				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
Test setup:					
Test Procedure:	<ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol>				

Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Measurement Record:	Uncertainty: 4.88dB
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

## Measurement Data

Charging & Data exchange :

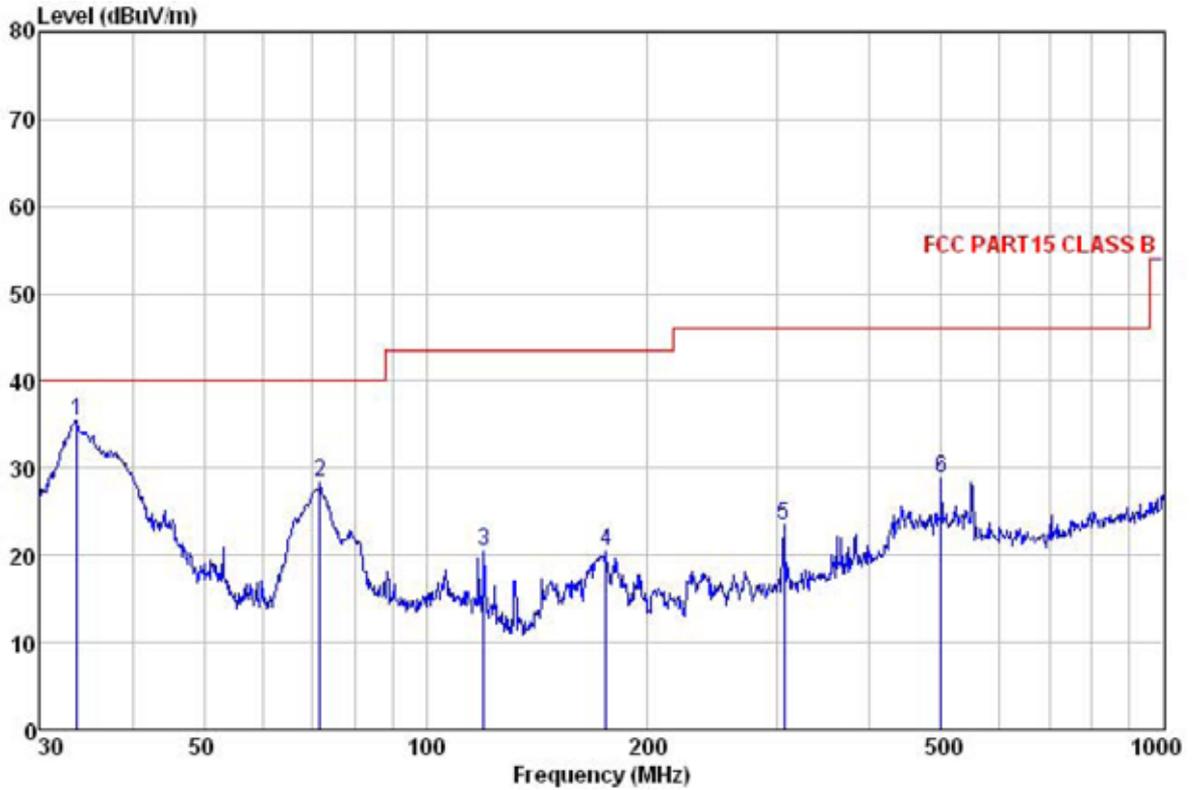
Horizontal:



Site : 3m chamber  
 Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) HORIZONTAL  
 Job No. : 117IT  
 Test mode : downloading pad with USB  
 Test Engineer: Joe

	ReadAntenna	Cable	Preamp	Limit	Over				
Freq	Level	Loss	Factor	Line	Limit	Remark			
MHz	dBuV	dB/m	dB	dB	dBuV/m	dB			
1	33.799	34.97	12.31	0.98	26.67	21.59	40.00	-18.41	QP
2	70.584	40.63	8.52	1.54	30.14	20.55	40.00	-19.45	QP
3	172.599	37.83	9.16	2.68	28.17	21.50	43.50	-22.00	QP
4	238.310	36.83	11.99	2.82	29.65	21.99	46.00	-24.01	QP
5	305.680	41.55	13.13	2.96	29.46	28.18	46.00	-17.82	QP
6	438.655	40.27	15.55	3.17	30.38	28.61	46.00	-17.39	QP

Vertical:

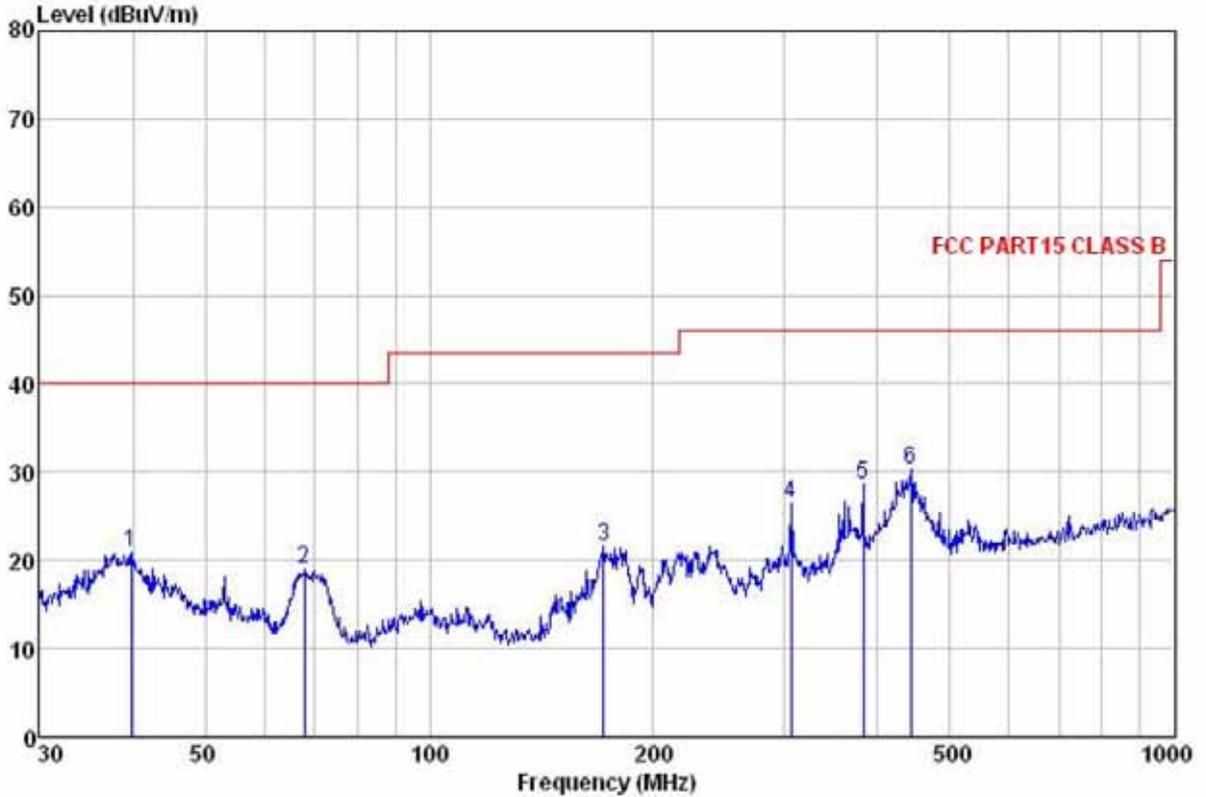


Site : 3m chamber  
 Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) VERTICAL  
 Job No. : 117IT  
 Test mode : downloading pad with USB  
 Test Engineer: Joe

	Read	Antenna	Cable	Preamp	Level	Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	33.680	48.86	12.31	0.98	26.66	35.49	40.00	-4.51 QP
2	71.832	48.57	8.32	1.56	30.14	28.31	40.00	-11.69 QP
3	119.856	37.57	10.48	2.17	29.70	20.52	43.50	-22.98 QP
4	175.652	35.92	9.36	2.70	27.57	20.41	43.50	-23.09 QP
5	305.680	36.84	13.13	2.96	29.46	23.47	46.00	-22.53 QP
6	499.425	39.19	16.58	3.61	30.52	28.86	46.00	-17.14 QP

Charging & Keyboard entry mode:

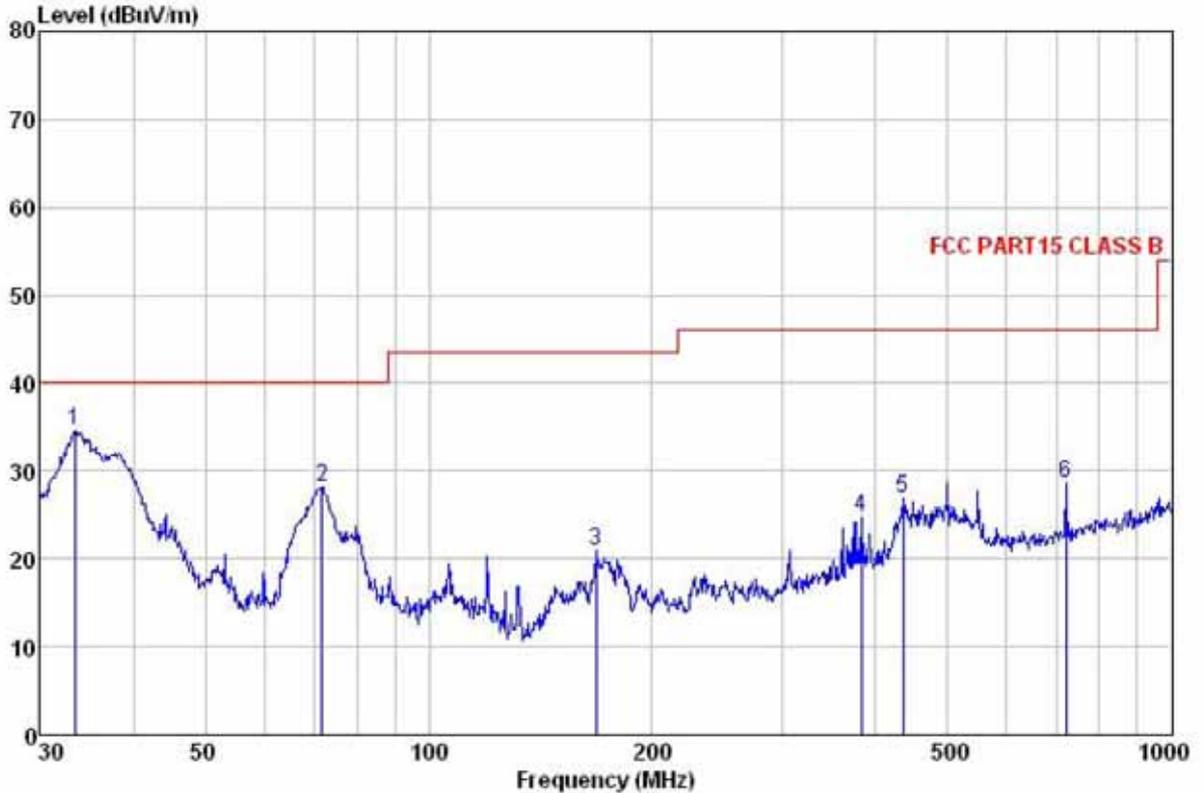
Horizontal:



Site : 3m chamber  
 Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) HORIZONTAL  
 Job No. : 117IT  
 Test mode : Writing mode  
 Test Engineer: Joe

	Freq MHz	ReadAntenna	Cable	Preamp	Level dBuV/m	Limit	Over	Remark
		Level dBuV	Loss dB	Factor dB		Line dBuV/m	Limit dB	
1	39.854	33.50	1.21	27.24	21.00	40.00	-19.00	QP
2	67.913	37.90	1.46	29.95	18.88	40.00	-21.12	QP
3	171.393	38.23	2.66	28.48	21.44	43.50	-22.06	QP
4	305.680	39.77	2.96	29.46	26.40	46.00	-19.60	QP
5	382.588	40.53	3.09	29.82	28.48	46.00	-17.52	QP
6	443.294	41.98	3.18	30.44	30.29	46.00	-15.71	QP

Vertical:



Site : 3m chamber  
 Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) VERTICAL  
 Job No. : 117IT  
 Test mode : Writing mode  
 Test Engineer: Joe

	ReadAntenna	Cable Preamp	Limit	Over					
Freq	Level	Factor	Loss	Factor	Level				
MHz	dBuV	dB/m	dB	dB	dBuV/m				
1	33.328	47.86	12.31	0.98	26.63	34.52	40.00	-5.48	QP
2	71.832	48.47	8.32	1.56	30.14	28.21	40.00	-11.79	QP
3	167.824	38.30	8.90	2.64	29.01	20.83	43.50	-22.67	QP
4	382.588	36.85	14.68	3.09	29.82	24.80	46.00	-21.20	QP
5	435.590	38.47	15.54	3.16	30.35	26.82	46.00	-19.18	QP
6	721.726	35.80	19.10	4.26	30.55	28.61	46.00	-17.39	QP