Report No: CCIS13020003402

FCC REPORT

Applicant:	Shenzhen Ogemray Technology Co., Ltd.
Address of Applicant:	3/F, No. 9 Bldg, Minxing Industrial Park, Minkang Rd, Minzhi St, Longhua, Baoan District, Shenzhen, China

Equipment Under Test (EUT)

Product Name:	Wireless USB Adapter
Model No.:	GWF-1C6T
FCC ID:	YWTWF53721CT
Applicable standards:	FCC CFR Title 47 Part 15 Subpart B: 2011
Date of sample receipt:	22 Feb., 2013
Date of Test:	25 Feb., 2013 to 04 Mar., 2013
Date of report issued:	04 Mar., 2013
Test Result :	Pass *

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

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	04 Mar., 2013	*Original*

Prepared By: Lisa Chen ***Date:*** 04 Mar., 2013

Report Clerk

Check By: Joe. Zhou ***Date:*** 04 Mar., 2013

Project Engineer

3 Contents

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4 Test Summary

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

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

5 General Information

5.1 Client Information

Applicant:	Shenzhen Ogemray Technology Co., Ltd.
Address of Applicant:	3/F, No. 9 Bldg, Minxing Industrial Park, Minkang Rd, Minzhi St, Longhua, Baoan District, Shenzhen, China
Manufacturer/ Factory:	Shenzhen Ogemray Technology Co., Ltd.
Address of Manufacturer/ Factory:	3/F, No. 9 Bldg, Minxing Industrial Park, Minkang Rd, Minzhi St, Longhua, Baoan District, Shenzhen, China

5.2 General Description of E.U.T.

Product Name:	Wireless USB Adapter
Model No.:	GWF-1C6T
Power supply:	DC 5V from USB Port

5.3 Operating Modes

Operating mode	Detail description
Data exchange mode	Keep the EUT in data exchange with PC

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX745	N/A	DoC
DELL	MONITOR	E178FPC	N/A	DoC
DELL	KEYBOARD	SK-8115	N/A	DoC
DELL	MOUSE	MOC5UO	N/A	DoC
HP	Printer	CB495A	05257893	DoC
MERCURY	Wireless router	MW150R	12922104015	FCC ID

5.5 Deviation from Standards

None

5.6 Abnormalities from Standard Conditions

None.

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**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. 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

● **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing.The Registration No. is CNAS L6048.

5.9 Test Location

All tests were performed at:

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
Address: No.B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District,Shenzhen, Guandong,China
Tel: 0755-23118282
Fax: 0755-23116366

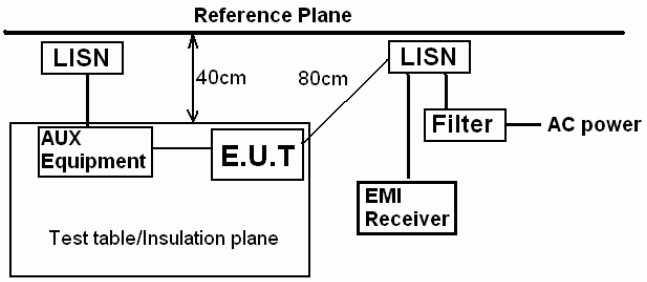
6 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	June 09 2012	June 08 2013
2	EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	Apr.01 2012	Mar. 31 2013
3	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	June 04 2012	June 03 2013
4	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	May 30 2012	May. 29 2013
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Coaxial Cable	CCIS	N/A	CCIS0016	Apr. 01 2012	Mar. 31 2013
7	Coaxial Cable	CCIS	N/A	CCIS0017	Apr. 01 2012	Mar. 31 2013
8	Coaxial cable	CCIS	N/A	CCIS0018	Apr. 01 2012	Mar. 31 2013
9	Coaxial Cable	CCIS	N/A	CCIS0019	Apr. 01 2012	Mar. 31 2013
10	Coaxial Cable	CCIS	N/A	CCIS0087	Apr. 01 2012	Mar. 31 2013
11	Amplifier(10KHz-1.3GHz)	HP	8447D	CCIS0003	Apr. 01 2012	Mar. 31 2013
12	Amplifier(1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	June 09 2012	June 08 2013
13	Spectrum analyzer	Rohde & Schwarz	FSP	CCIS0023	May 29 2012	May 28 2013
14	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A
15	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A

Conducted Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	June 09 2012	June 08 2013
2	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	May 25 2012	May. 24 2013
3	LISN	CHASE	MN2050D	CCIS0074	Apr. 01 2012	Mar. 31 2013
4	Coaxial Cable	CCIS	N/A	CCIS0086	Apr. 01 2012	Mar. 31 2013

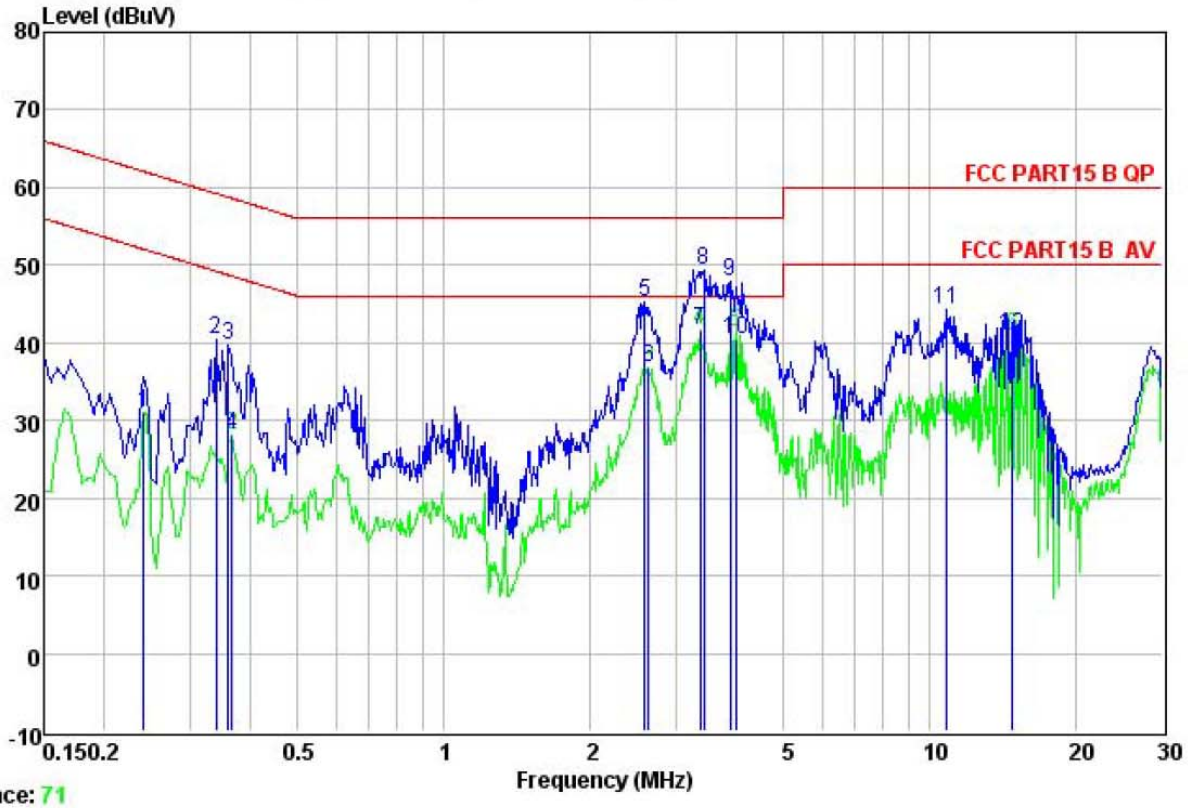
7 Test results and Measurement Data

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:	Frequency range (MHz) / Limit (dBμV): 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:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test procedure	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. 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). 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.
Test environment:	Temp.: 23 °C Humid.: 56% Press.: 1 01kPa
Measurement Record:	Uncertainty: 3.28dB
Test Instruments:	Refer to section 6 for details
Test mode:	Pre-scan all test mode in the section 5.3, and found the bleow mode which it is worse case mode.
Test results:	Pass

Measurement data:

Line:

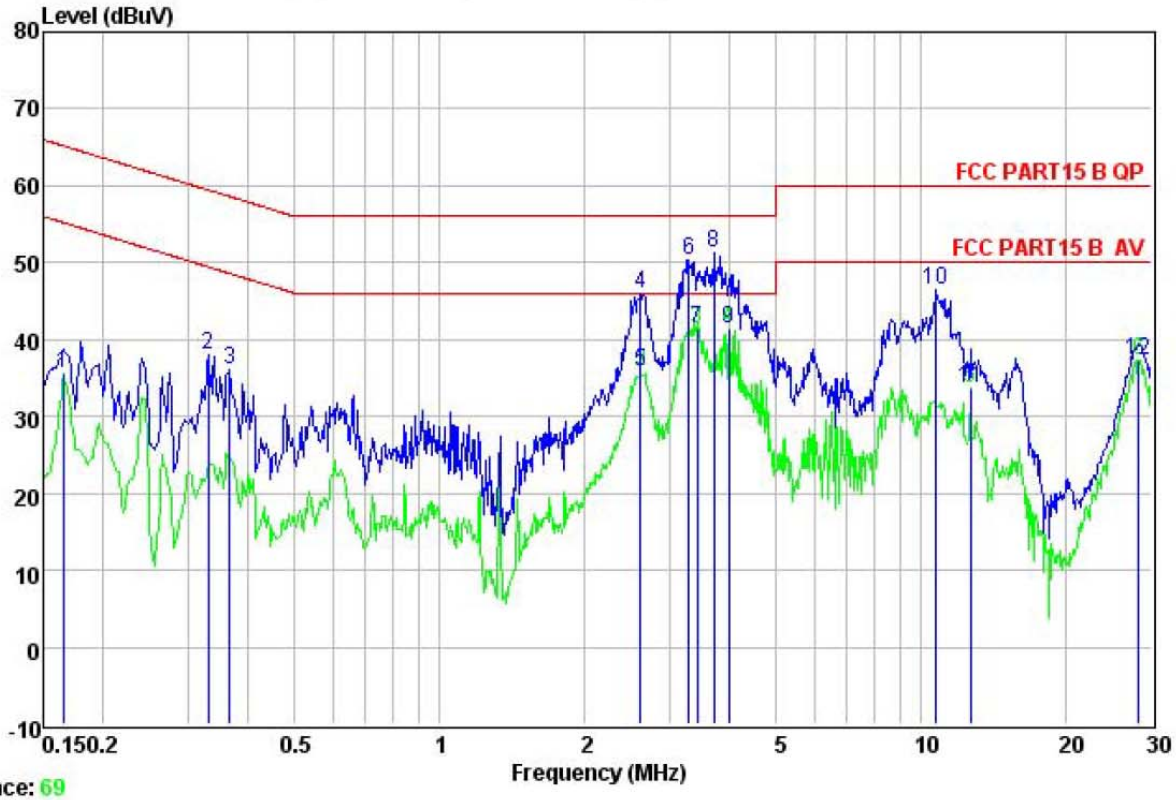


Trace: 71

```
Site         : CCIS Conducted Test Site
Condition    : FCC PART15 B QP LISN LINE
Job NO.      : 034RF
EUT          : Wireless USB Adapter
Test Mode    : Ping mode
Model        : GWF-1C6T
Power Rating: AC 120V/60Hz on PC mains port
Environment : Temp: 23 'C Huni:56%  Atmos:101KPa
Test engieer: Vincent
```

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.240	20.08	10.23	0.75	31.06	52.08	-21.02	Average
2	0.339	29.36	10.27	0.73	40.36	59.22	-18.86	QP
3	0.360	28.62	10.27	0.73	39.62	58.74	-19.12	QP
4	0.365	17.11	10.27	0.72	28.10	48.61	-20.51	Average
5	2.581	33.98	10.28	0.94	45.20	56.00	-10.80	QP
6	2.636	25.68	10.28	0.94	36.90	46.00	-9.10	Average
7	3.364	30.33	10.29	0.90	41.52	46.00	-4.48	Average
8	3.417	38.13	10.29	0.90	49.32	56.00	-6.68	QP
9	3.881	36.81	10.29	0.89	47.99	56.00	-8.01	QP
10	3.985	29.27	10.29	0.89	40.45	46.00	-5.55	Average
11	10.790	33.16	10.25	0.94	44.35	60.00	-15.65	QP
12	14.750	29.68	10.23	0.90	40.81	50.00	-9.19	Average

Neutral:



Trace: 69

```
Site         : CCIS Conducted Test Site
Condition    : FCC PART15 B QP LISN NEUTRAL
Job NO.      : 034RF
EUT          : Wireless USB Adapter
Test Mode    : Ping mode
Model        : GWF-1C6T
Power Rating: AC 120V/60Hz on PC mains port
Environment : Temp: 23 'C Huni:56%  Atmos:101KPa
Test engieer: Vincent
```

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.165	24.49	10.26	0.78	35.53	55.21	-19.68	Average
2	0.330	26.97	10.25	0.73	37.95	59.44	-21.49	QP
3	0.365	25.10	10.25	0.72	36.07	58.61	-22.54	QP
4	2.608	34.85	10.27	0.94	46.06	56.00	-9.94	QP
5	2.608	24.60	10.27	0.94	35.81	46.00	-10.19	Average
6	3.293	39.24	10.28	0.90	50.42	56.00	-5.58	QP
7	3.417	30.16	10.28	0.90	41.34	46.00	-4.66	Average
8	3.700	40.01	10.28	0.89	51.18	56.00	-4.82	QP
9	3.985	30.30	10.28	0.89	41.47	46.00	-4.53	Average
10	10.733	35.21	10.22	0.94	46.37	60.00	-13.63	QP
11	12.649	22.42	10.23	0.91	33.56	50.00	-16.44	Average
12	28.302	25.76	10.77	0.87	37.40	50.00	-12.60	Average

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

7.2 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109
Test Method:	ANSI C63.4:2003
Test Frequency Range:	30MHz to 6000MHz
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver setup:

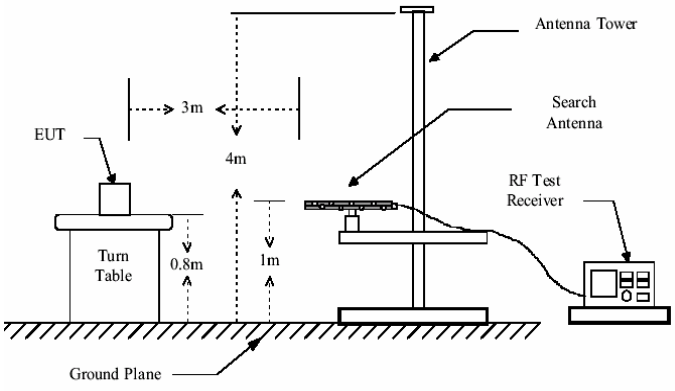
Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
Above 1GHz	Peak	1MHz	3MHz	Peak Value
	Peak	1MHz	10Hz	Average Value

Limit:

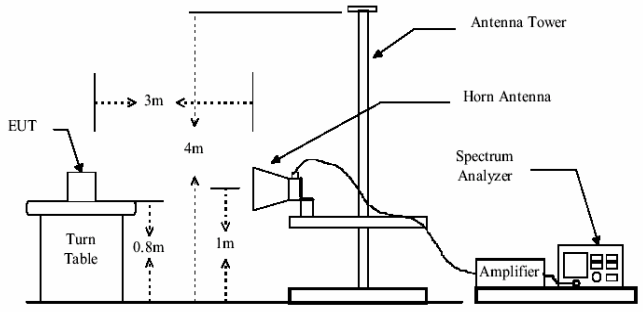
Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
	74.0	Peak Value

Test setup:

Below 1GHz



Above 1GHz

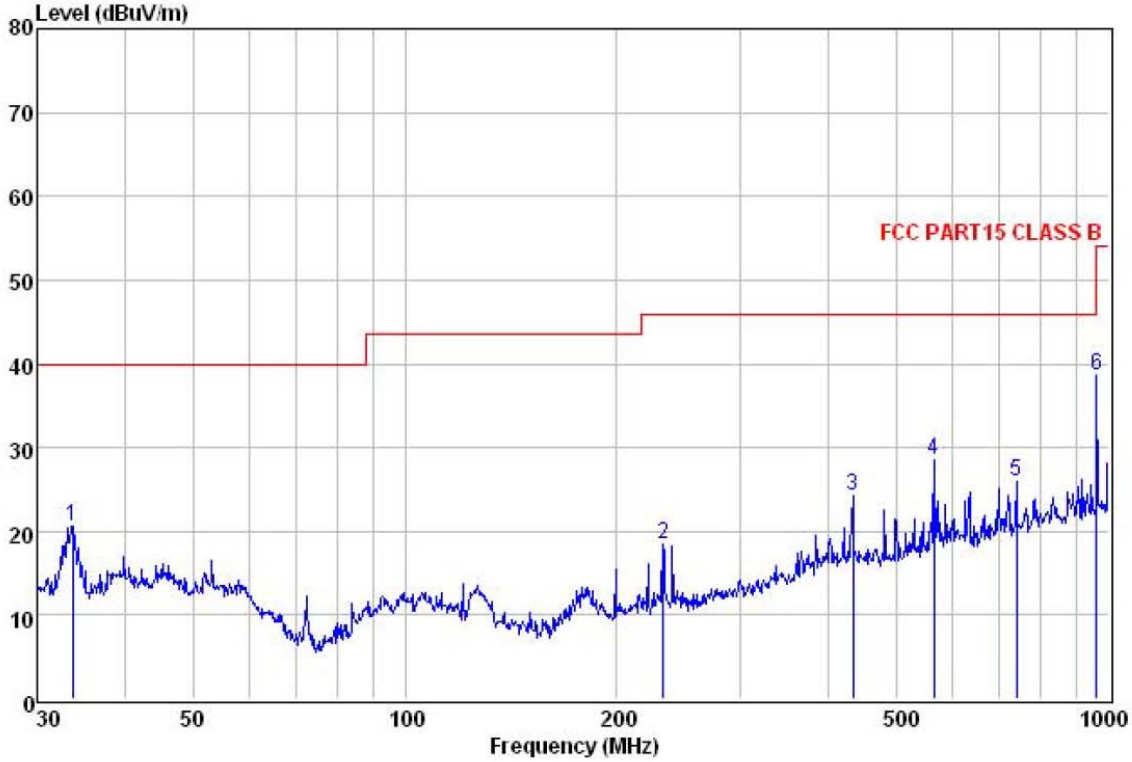


Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 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. 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. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 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.
Test environment:	Temp.: 25 °C Humid.: 55% Press.: 1 01kPa
Measurement Record:	Uncertainty: 4.88dB
Test Instruments:	Refer to section 6 for details
Test mode:	Pre-scan all test mode in the section 5.3, and found the bleow mode which it is worse case mode.
Test results:	Passed

Measurement Data

Below 1GHz

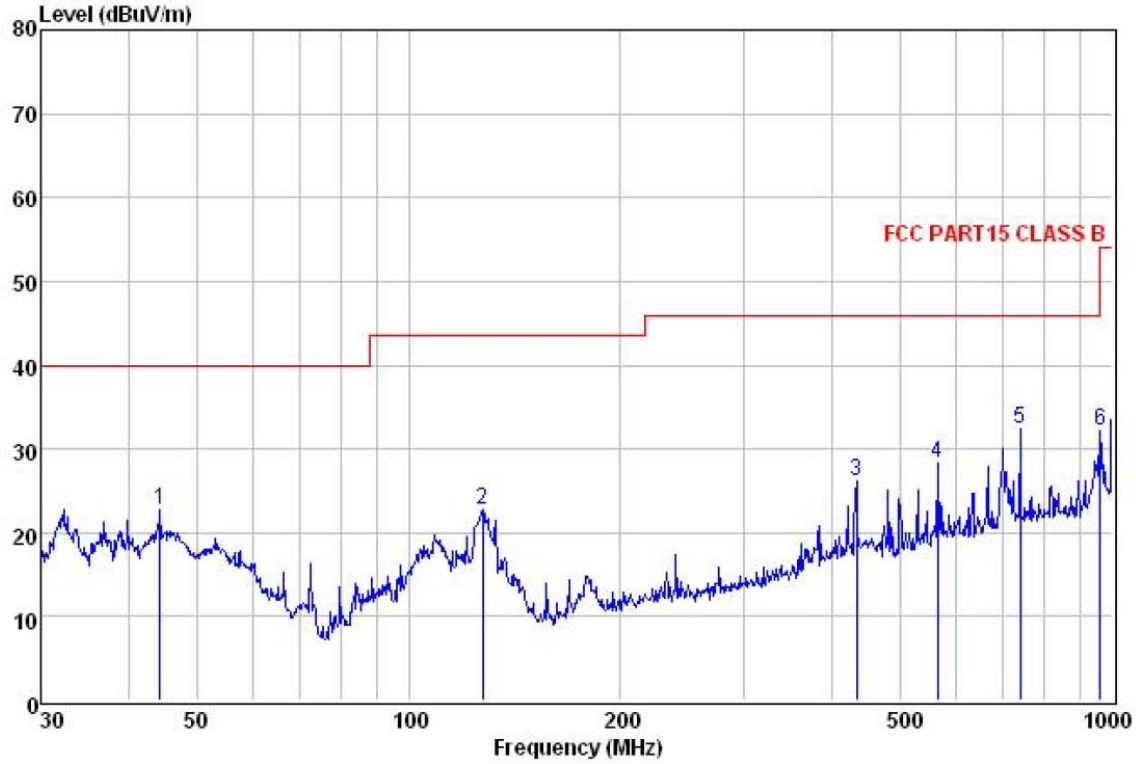
Horizontal:



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) HORIZONTAL
Job No. : 034RF
EUT : Wireless USB Adapter
Model : GWF-1C6T
Test mode : Ping mode
Power Rating : AC 120V/60Hz on PC mains
Environment : Temp:25.5°C Huni:55% Atmos:101KPa
Test Engineer: Vincent

	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	33.680	33.93	12.31	0.98	26.66	20.56	40.00	-19.44	QP
2	232.532	33.56	11.72	2.83	29.67	18.44	46.00	-27.56	QP
3	432.546	35.96	15.53	3.16	30.31	24.34	46.00	-21.66	QP
4	564.639	37.27	17.83	3.90	30.54	28.46	46.00	-17.54	QP
5	739.661	32.77	19.29	4.32	30.52	25.86	46.00	-20.14	QP
6	962.162	42.83	21.49	4.27	29.90	38.69	54.00	-15.31	QP

Vertical:

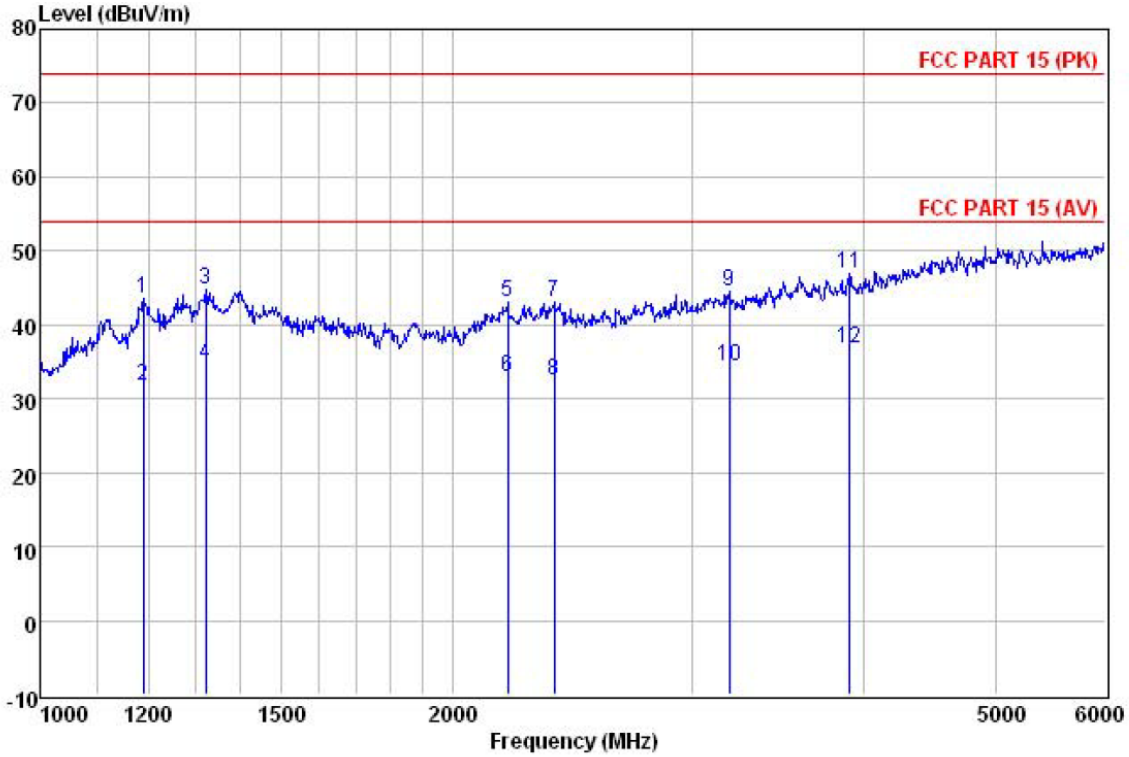


Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(2012.4.1) VERTICAL
Job No. : 034RF
EUT : Wireless USB Adapter
Model : GWF-1C6T
Test mode : Ping mode
Power Rating : AC 120V/60Hz on PC mains
Environment : Temp:25.5℃ Huni:55% Atmos:101KPa
Test Engineer: Vincent

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	44.275	35.65	13.55	1.28	27.72	22.76	40.00	-17.24	QP
2	127.218	40.77	9.32	2.25	29.58	22.76	43.50	-20.74	QP
3	432.546	37.81	15.53	3.16	30.31	26.19	46.00	-19.81	QP
4	564.639	37.06	17.83	3.90	30.54	28.25	46.00	-17.75	QP
5	739.661	39.29	19.29	4.32	30.52	32.38	46.00	-13.62	QP
6	962.162	36.21	21.49	4.27	29.90	32.07	54.00	-21.93	QP

Above 1GHz

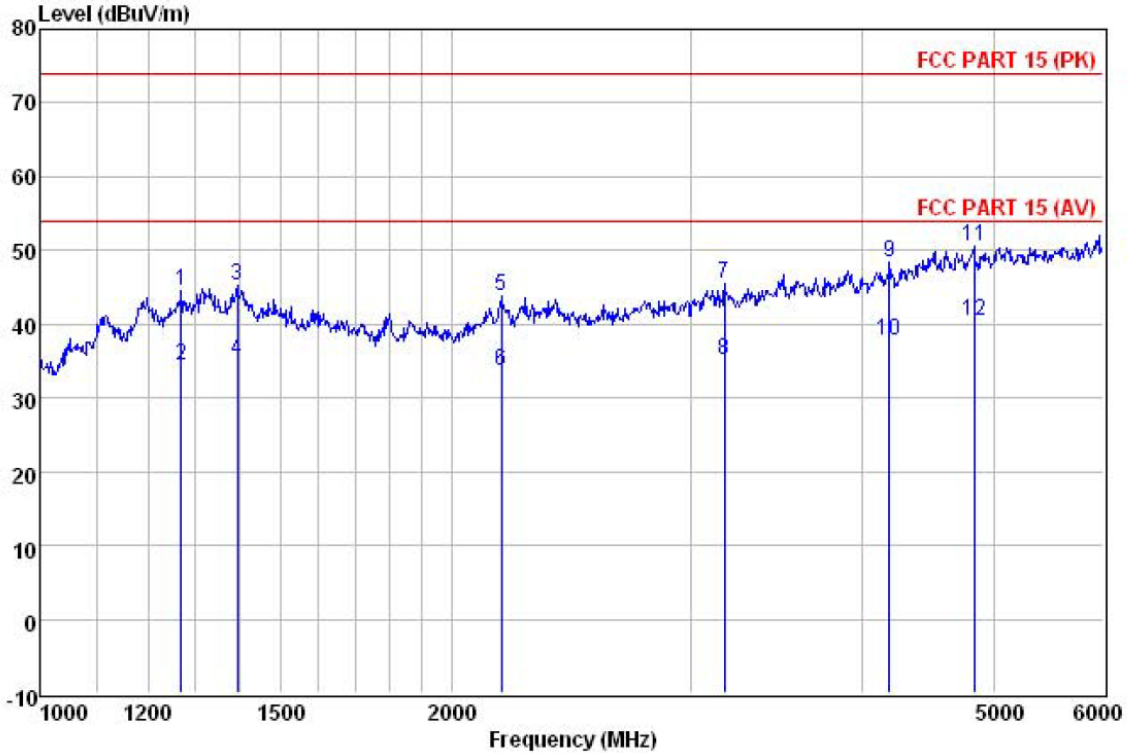
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(>1GHZ) HORIZONTAL
Job No. : 034RF
EUT : Wireless USB Adapter
Model : GWF-1C6T
Test mode : Ping mode
Power Rating : AC 120V/60Hz on PC mains
Environment : Temp:25.5℃ Huni:55% Atmos:101KPa
Test Engineer: Vincent

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1189.818	34.63	24.88	2.59	18.65	43.45	74.00	-30.55	Peak
2	1189.818	23.01	24.88	2.59	18.65	31.83	54.00	-22.17	Average
3	1322.488	36.57	25.65	2.77	20.31	44.68	74.00	-29.32	Peak
4	1322.488	26.45	25.65	2.77	20.31	34.56	54.00	-19.44	Average
5	2195.879	42.06	27.95	3.67	30.71	42.97	74.00	-31.03	Peak
6	2195.879	32.00	27.95	3.67	30.71	32.91	54.00	-21.09	Average
7	2376.003	41.80	27.65	3.80	30.15	43.10	74.00	-30.90	Peak
8	2376.003	31.25	27.65	3.80	30.15	32.55	54.00	-21.45	Average
9	3187.600	40.50	28.76	4.58	29.20	44.64	74.00	-29.36	Peak
10	3187.600	30.15	28.76	4.58	29.20	34.29	54.00	-19.71	Average
11	3902.968	38.92	29.75	5.21	26.86	47.02	74.00	-26.98	Peak
12	3902.968	28.64	29.75	5.21	26.86	36.74	54.00	-17.26	Average

Vertical:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(>1GHZ) VERTICAL
Job No. : 034RF
EUT : Wireless USB Adapter
Model : GWF-1C6T
Test mode : Ping mode
Power Rating : AC 120V/60Hz on PC mains
Environment : Temp:25.5℃ Huni:55% Atmos:101KPa
Test Engineer: Vincent

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1269.095	35.92	25.51	2.70	19.63	44.50	74.00	-29.50	Peak
2	1269.095	25.86	25.51	2.70	19.63	34.44	54.00	-19.56	Average
3	1395.520	38.32	25.40	2.87	21.39	45.20	74.00	-28.80	Peak
4	1395.520	28.31	25.40	2.87	21.39	35.19	54.00	-18.81	Average
5	2176.294	43.08	27.81	3.65	30.75	43.79	74.00	-30.21	Peak
6	2176.294	33.04	27.81	3.65	30.75	33.75	54.00	-20.25	Average
7	3170.512	41.32	28.82	4.55	29.27	45.42	74.00	-28.58	Peak
8	3170.512	31.14	28.82	4.55	29.27	35.24	54.00	-18.76	Average
9	4185.457	38.71	30.17	5.45	25.99	48.34	74.00	-25.66	Peak
10	4185.457	28.13	30.17	5.45	25.99	37.76	54.00	-16.24	Average
11	4830.532	37.25	31.55	5.89	24.07	50.62	74.00	-23.38	Peak
12	4830.532	27.08	31.55	5.89	24.07	40.45	54.00	-13.55	Average