



FCC 47 CFR PART 15 SUBPART B

Product Type : IPn4G
Applicant : Microhard Systems Inc.
Address : 150 Country Hills Landing NW Calgary, Alberta, Canada T3K 5P3
Trade Name : Microhard
Model Number : IPn4G
Test Specification : FCC 47 CFR PART 15 SUBPART B: Oct., 2012
ANSI C63.4: 2009
CISPR 22: 1997
ICES-003: Issue 5
Receive Date : Dec. 07, 2012
Test Period : Dec. 11, 2012
Issue Date : Feb. 23, 2013

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Dec. 17, 2012	Initial Issue	
01	Feb. 23, 2013	Revised ID	Joyce Liao

Verification of Compliance

Issued Date: 02/23/2013

Product Type : IPn4G
Applicant : Microhard Systems Inc.
Address : 150 Country Hills Landing NW Calgary, Alberta, Canada T3K 5P3
Trade Name : Microhard
Model Number : IPn4G
FCC ID : NS9IPN4GNBG30
IC : 3143A-IPN4GNBG30
EUT Rated Voltage : DC 12.0V, 1.25A
Test Voltage : AC 120V, 60Hz
Applicable Standard : FCC 47 CFR PART 15 SUBPART B: Oct., 2011
ANSI C63.4: 2009
CISPR 22: 1997.
ICES-003: Issue 5

Test Result : Complied

Performing Lab. : A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
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Tel : +886-3-2710188 / Fax : +886-3-2710190
Taiwan Accreditation Foundation accreditation number: 1330
<http://www.atl-lab.com.tw/e-index.htm>



The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.



Approved By :  Reviewed By : 
(Manager) (Murphy Wang) (Testing Engineer) (Frank Lin)

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1 General Information

1.1 Summary of Test Result

Emission			
Standard	Item	Result	Remark
FCC 47 CFR PART 15 SUBPART B ANSI C63.4 ICES-003	Conducted Emission	PASS	Meet Class B limit
FCC 47 CFR PART 15 SUBPART B ANSI C63.4 ICES-003	Radiated Emission	PASS	Meet Class B limit

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2 Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.24 dB.

Conducted Emissions (Telecommunication Ports)

The measurement uncertainty is evaluated as ± 2.24 dB.

Radiated Emission

The measurement uncertainty of 30 MHz - 1GHz is evaluated as ± 3.072 dB.

The measurement uncertainty of 1GHz - 40GHz is evaluated as ± 3.072 dB.

2 EUT Description

Product	IPn4G
Trade Name	Microhard
Model Number	IPn4G
FCC ID	NS9IPN4GNBG30
IC	3143A-IPN4GNBG30
Applicant	Microhard Systems Inc. 150 Country Hills Landing NW Calgary, Alberta, Canada T3K 5P3
Manufacturer	Microhard Systems Inc. 150 Country Hills Landing NW Calgary, Alberta, Canada T3K 5P3
Component	
Power Adapter	BI, BI30-120200-AdU Input:100-240Vac, 50/60Hz, 1.2A Output: 12Vdc, 2A Cable out: Non-Shielded, 1.6 m with one core

I/O Port Description :

I/O Port Types	Q'TY	Test Description
1). RS-232 Port	2	Connected to Notebook / Terminal
2). LAN Port	1	Connected to Notebook
3). Antenna Port	2	Connected to 2G/3G Antenna
4). Antenna Port	1	Connected to GPS Antenna
5). SIM Card Port	1	Connected to SIM Card
6). DC Power Port	1	Connected to AC Adapter

3 Test Methodology

3.1. Decision of Test Mode

3.1.1. The following test mode(s) were scanned during the preliminary test:

Pre-Test Mode
Mode 1: GSM 850 + Wi-Fi Link Mode
Mode 2: GSM 1900 + Wi-Fi Link Mode
Mode 3: WCDMA Band II + Wi-Fi Link Mode
Mode 4: WCDMA Band IV + Wi-Fi Link Mode
Mode 5: WCDMA Band V + Wi-Fi Link Mode
Mode 6: WCDMA Band XVII + Wi-Fi Link Mode

3.1.2. After the preliminary scan, the following test mode was found to produce the highest emission level.

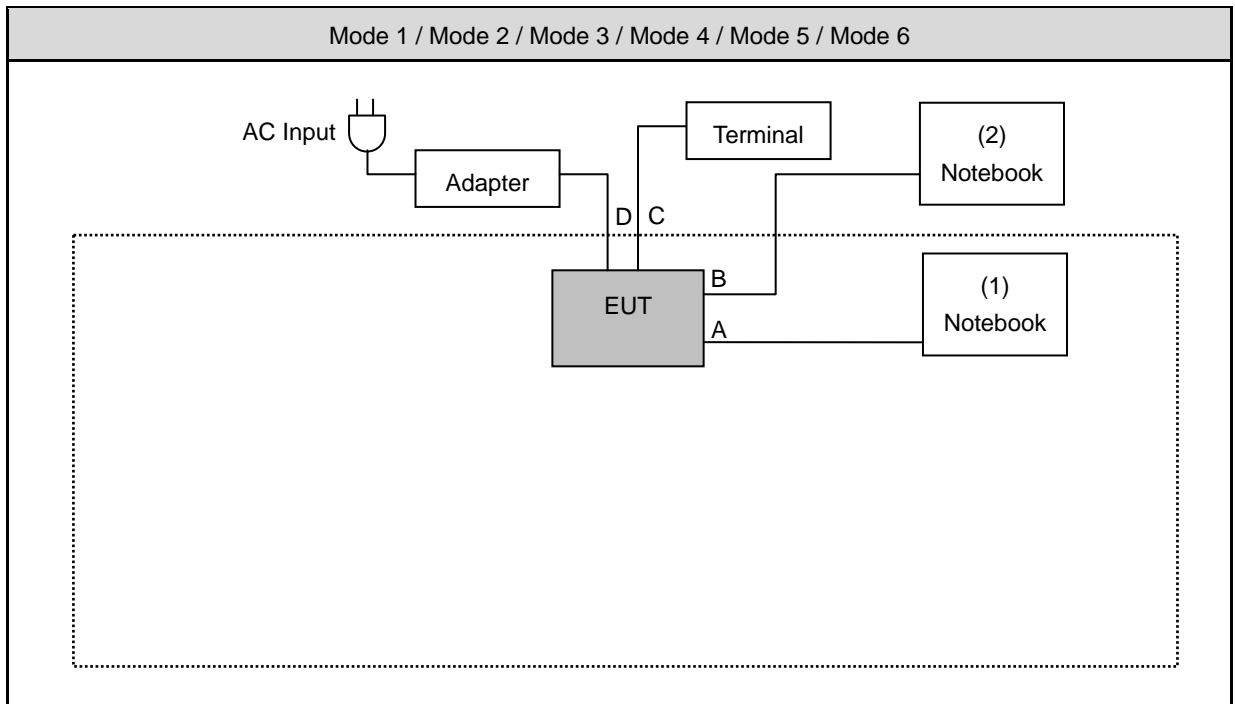
Final Test Mode			
Emission	Conducted Emission		Mode 1 / Mode 2 / Mode 3 / Mode 4 / Mode 5 / Mode 6
	Radiated Emission	Below 1GHz	Mode 1 / Mode 2 / Mode 3 / Mode 4 / Mode 5 / Mode 6
		Above 1GHz	Mode 1 / Mode 2 / Mode 3 / Mode 4 / Mode 5 / Mode 6

Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

3.2. EUT Exercise Software

1	Setup the EUT and simulators as shown on 3.3.
2	Turn on the power of all equipment.
3	EUT link to CMU200.
4	The EUT LAN port connects to the Notebook and data will communicate between Notebook through EUT.
5	The EUT will start to operate function.

3.3. Configuration of Test System Details



Signal Cable Type		Signal Cable Description
A	LAN Cable	Non-Shielded, 3.0m
B	RS-232 Cable	Shielded, 1.8m
C	RS-232 Cable	Shielded, 1.8m
D	DC Power Cable	Non-Shielded, 1.6m with one core

Devices Description					
	Product	Manufacturer	Model Number	Serial Number	Power Cord
(1)	Notebook	DELL	D531	GCD CD-T6HYQ-3MQ8R-JCPD3-3G8G2	Non-Shielded, 2.0m
(2)	Notebook	DELL	D830	CN-OHN341-48643-88Q-1221	Non-Shielded, 2.0m

3.4. Test Site Environment

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC part 15: 15.107 Conducted Emission	15-35	26
Humidity (%RH)		25-75	60
Barometric pressure (mbar)		860-1060	950
Temperature (°C)	FCC part 15: 15.109 Radiated Emission	15-35	26
Humidity (%RH)		25-75	60
Barometric pressure (mbar)		860-1060	950

4 Emission Test

4.1. Conducted Emission Measurement

4.1.1. Limit

A.C. Mains Conducted Interference Limit

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

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

(2) The limit decreases in line with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

4.1.2. Test Instruments

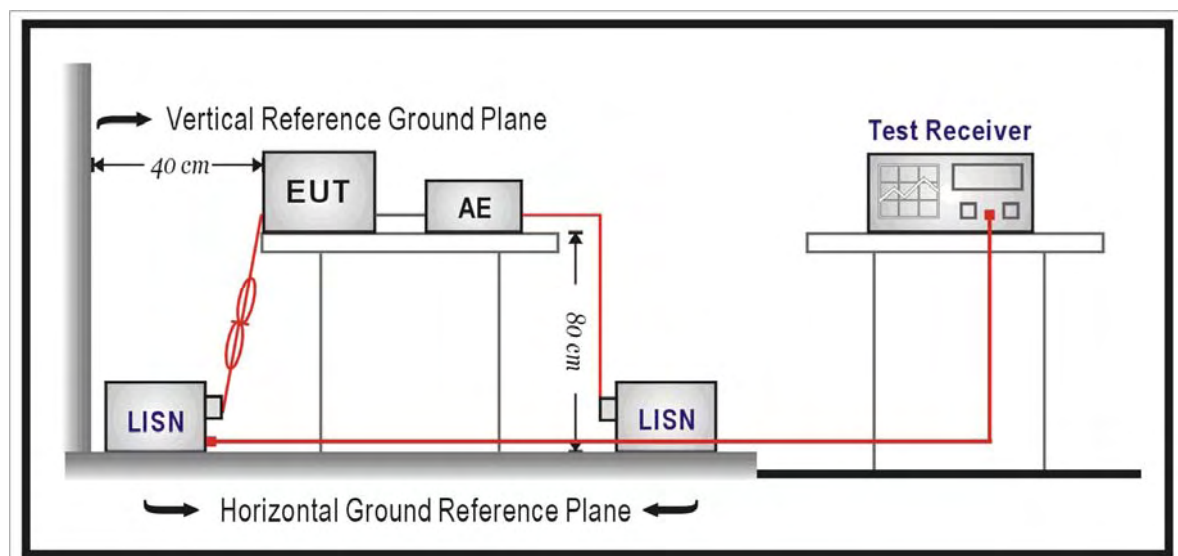
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	06/18/2012	(1)
LISN	R&S	ENV216	101040	03/07/2012	(1)
LISN	R&S	ENV216	101041	03/07/2012	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

4.1.3. Test Setup

A.C. mains setup



4.1.4. 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.

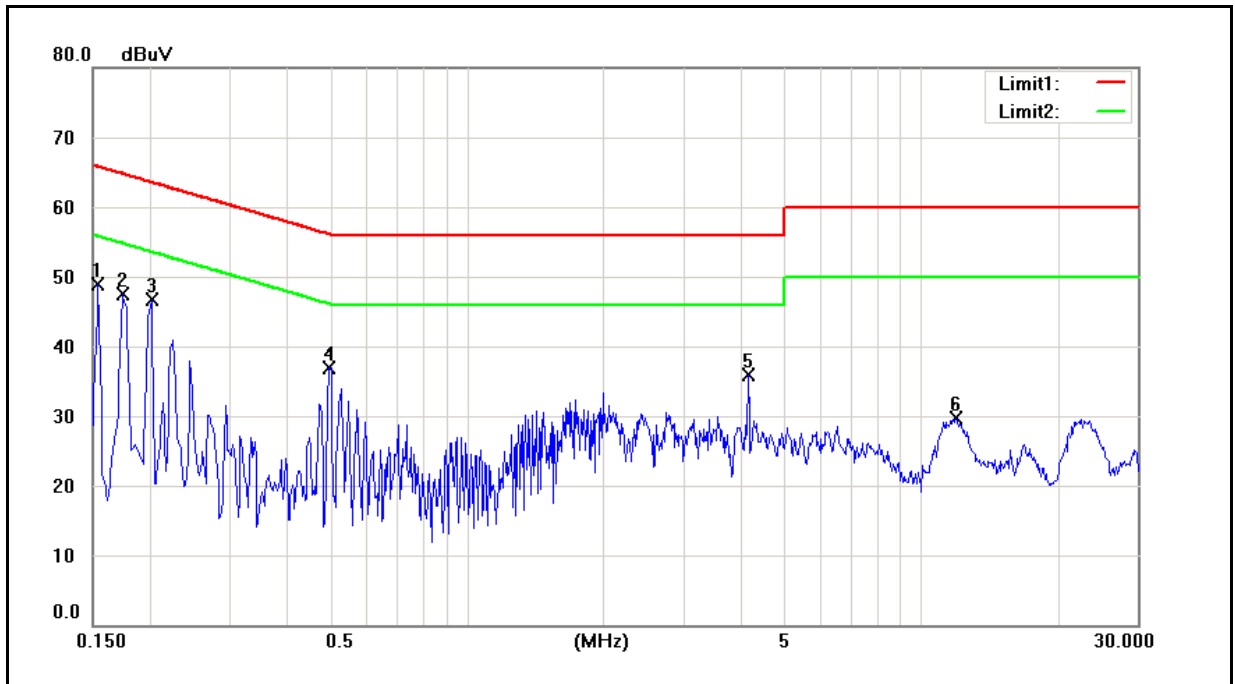
For A.C. mains conducted interference, measured both sides of A.C. lines and carried out using quasi-peak and average detector receivers of maximum conducted interference.

Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. The voltage limits shall be met. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored.

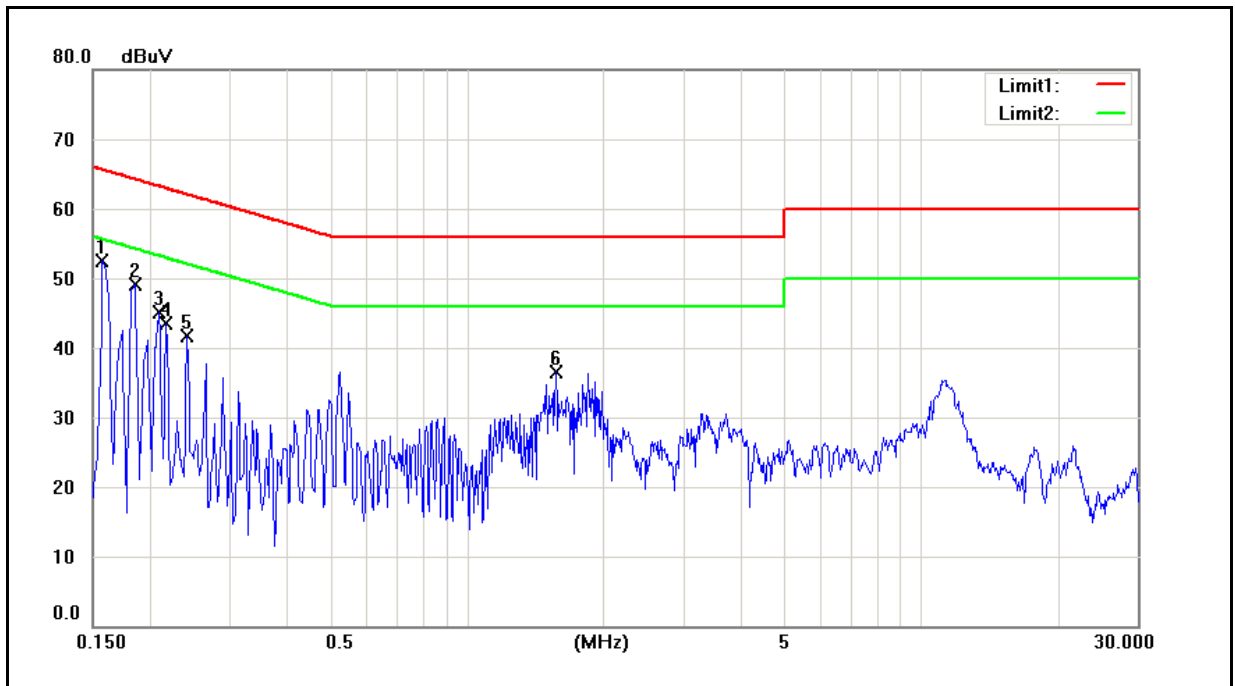
4.1.5. Test Result

Standard:	FCC Part 15B Class B	Line:	Li
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



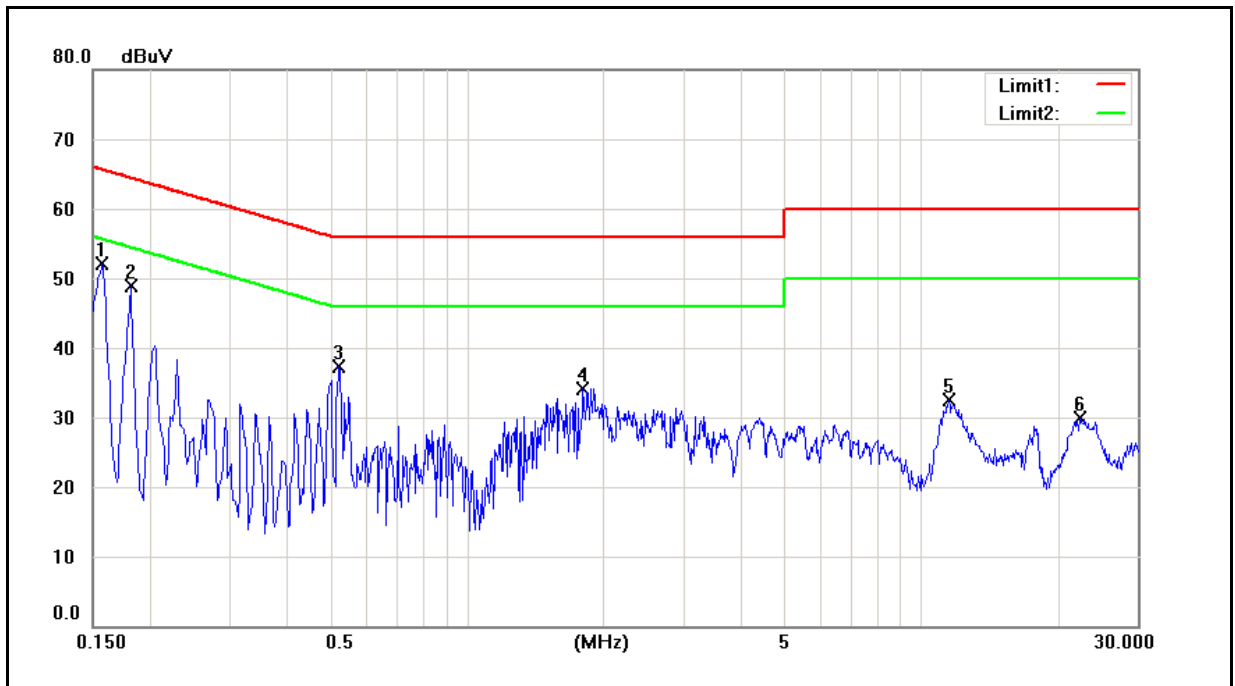
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	42.44	26.95	9.72	52.16	36.67	65.78	55.78	-13.62	-19.11	Pass
2	0.1740	34.90	16.89	9.72	44.62	26.61	64.77	54.77	-20.15	-28.16	Pass
3	0.2020	24.38	10.42	9.72	34.10	20.14	63.53	53.53	-29.43	-33.39	Pass
4	0.4980	27.66	25.33	9.72	37.38	35.05	56.03	46.03	-18.65	-10.98	Pass
5	4.1780	15.39	10.81	9.78	25.17	20.59	56.00	46.00	-30.83	-25.41	Pass
6	11.9500	18.87	12.88	9.92	28.79	22.80	60.00	50.00	-31.21	-27.20	Pass

Standard:	FCC Part 15B Class B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



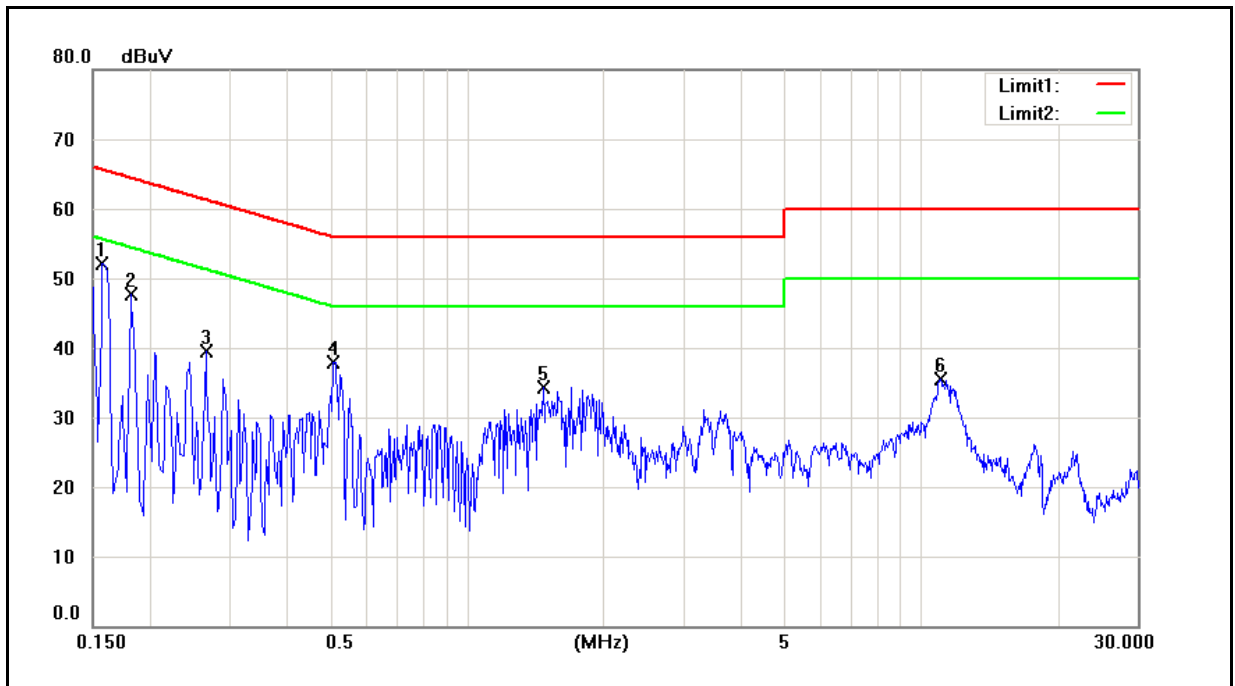
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	42.21	25.66	9.65	51.86	35.31	65.57	55.57	-13.71	-20.26	Pass
2	0.1860	37.64	21.59	9.64	47.28	31.23	64.21	54.21	-16.93	-22.98	Pass
3	0.2100	35.30	19.83	9.64	44.94	29.47	63.21	53.21	-18.27	-23.74	Pass
4	0.2180	28.62	9.99	9.64	38.26	19.63	62.89	52.89	-24.63	-33.26	Pass
5	0.2420	29.41	12.80	9.64	39.05	22.44	62.03	52.03	-22.98	-29.59	Pass
6	1.5740	18.85	15.31	9.70	28.55	25.01	56.00	46.00	-27.45	-20.99	Pass

Standard:	FCC Part 15B Class B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



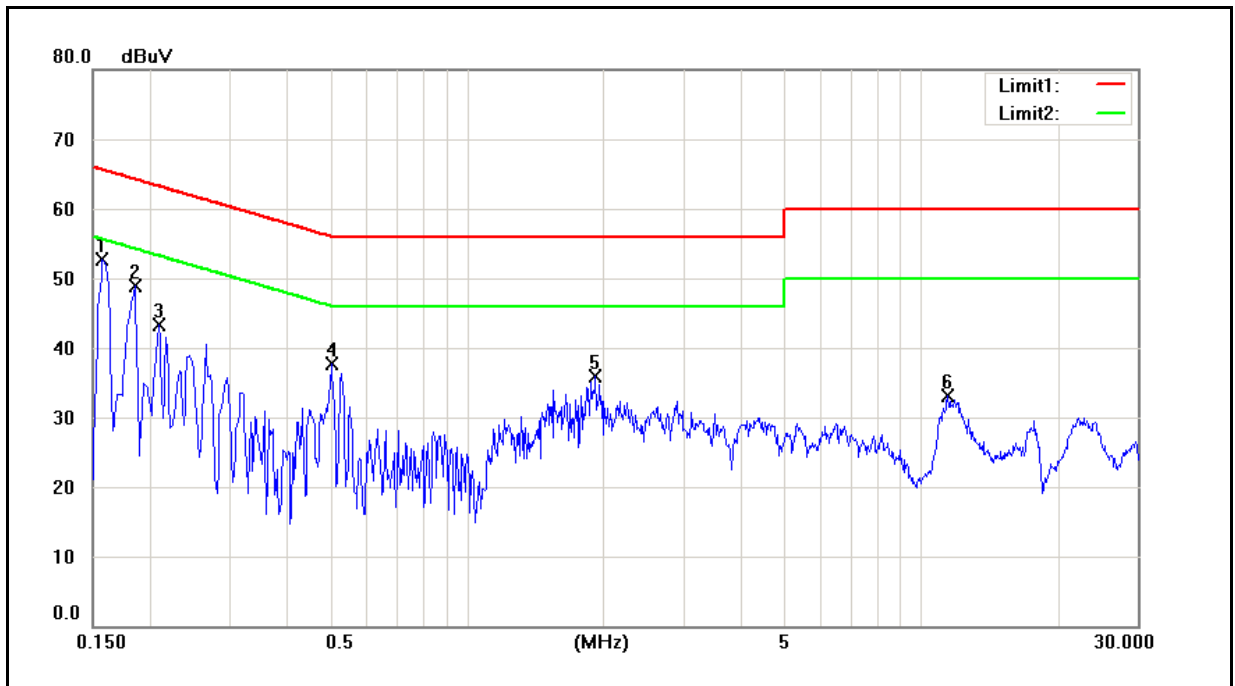
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	41.98	26.32	9.72	51.70	36.04	65.57	55.57	-13.87	-19.53	Pass
2	0.1820	37.62	22.28	9.72	47.34	32.00	64.39	54.39	-17.05	-22.39	Pass
3	0.5220	26.16	21.89	9.72	35.88	31.61	56.00	46.00	-20.12	-14.39	Pass
4	1.8060	17.94	9.88	9.78	27.72	19.66	56.00	46.00	-28.28	-26.34	Pass
5	11.5220	18.56	11.92	9.98	28.54	21.90	60.00	50.00	-31.46	-28.10	Pass
6	22.4660	16.62	11.59	9.76	26.38	21.35	60.00	50.00	-33.62	-28.65	Pass

Standard:	FCC Part 15B Class B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



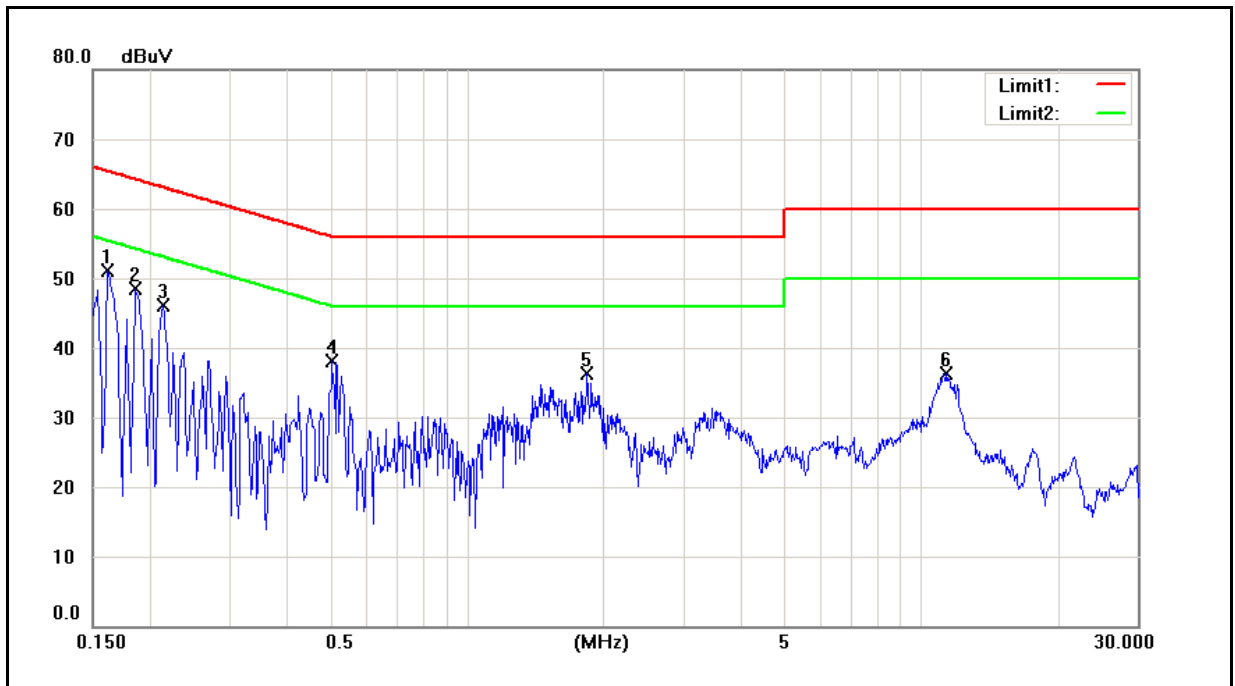
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	42.01	25.41	9.65	51.66	35.06	65.57	55.57	-13.91	-20.51	Pass
2	0.1820	36.47	20.14	9.64	46.11	29.78	64.39	54.39	-18.28	-24.61	Pass
3	0.2660	27.59	15.86	9.64	37.23	25.50	61.24	51.24	-24.01	-25.74	Pass
4	0.5100	24.27	14.16	9.64	33.91	23.80	56.00	46.00	-22.09	-22.20	Pass
5	1.4780	20.42	14.96	9.69	30.11	24.65	56.00	46.00	-25.89	-21.35	Pass
6	11.0740	22.37	16.10	10.03	32.40	26.13	60.00	50.00	-27.60	-23.87	Pass

Standard:	FCC Part 15B Class B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



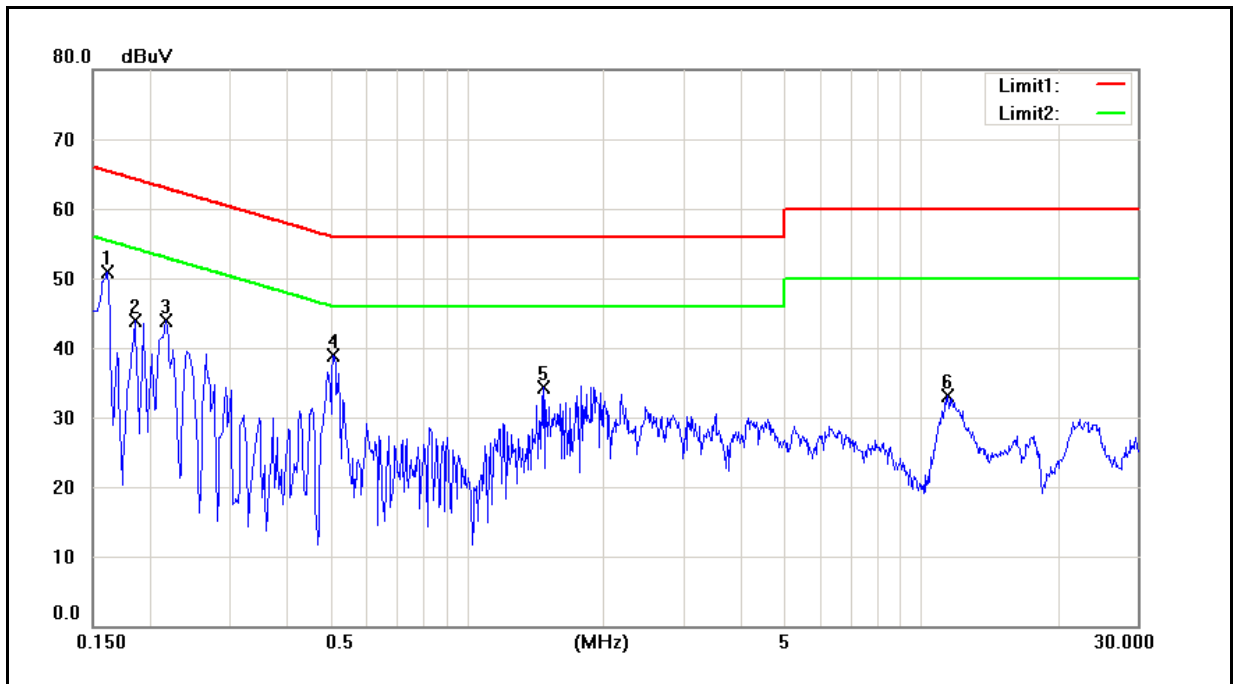
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1	0.1580	41.51	25.63	9.72	51.23	35.35	65.57	55.57	-14.34	-20.22	Pass
2	0.1860	38.16	23.53	9.72	47.88	33.25	64.21	54.21	-16.33	-20.96	Pass
3	0.2100	34.00	20.43	9.72	43.72	30.15	63.21	53.21	-19.49	-23.06	Pass
4	0.5020	26.19	23.63	9.72	35.91	33.35	56.00	46.00	-20.09	-12.65	Pass
5	1.9260	21.96	12.75	9.80	31.76	22.55	56.00	46.00	-24.24	-23.45	Pass
6	11.4980	18.60	12.25	9.98	28.58	22.23	60.00	50.00	-31.42	-27.77	Pass

Standard:	FCC Part 15B Class B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



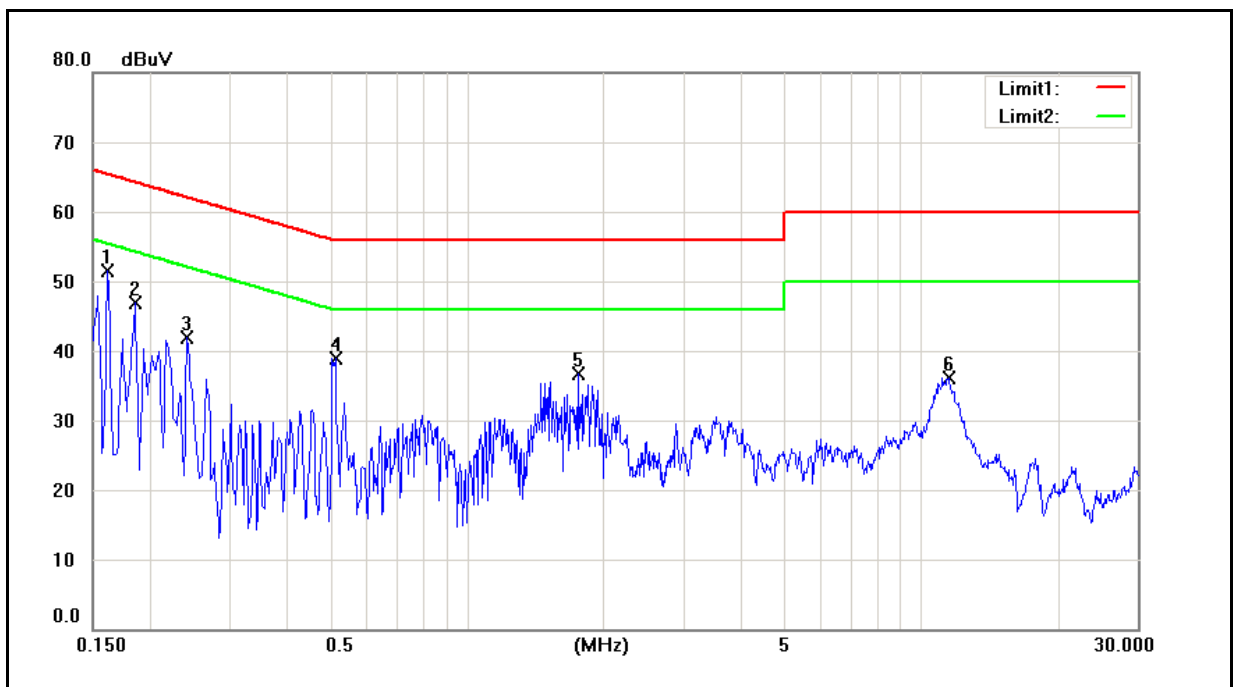
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1	0.1620	40.42	24.55	9.65	50.07	34.20	65.36	55.36	-15.29	-21.16	Pass
2	0.1860	38.02	21.82	9.64	47.66	31.46	64.21	54.21	-16.55	-22.75	Pass
3	0.2140	34.46	19.73	9.64	44.10	29.37	63.05	53.05	-18.95	-23.68	Pass
4	0.5060	27.23	25.11	9.64	36.87	34.75	56.00	46.00	-19.13	-11.25	Pass
5	1.8420	21.83	14.43	9.71	31.54	24.14	56.00	46.00	-24.46	-21.86	Pass
6	11.3780	22.52	16.01	10.00	32.52	26.01	60.00	50.00	-27.48	-23.99	Pass

Standard:	FCC Part 15B Class B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	4	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



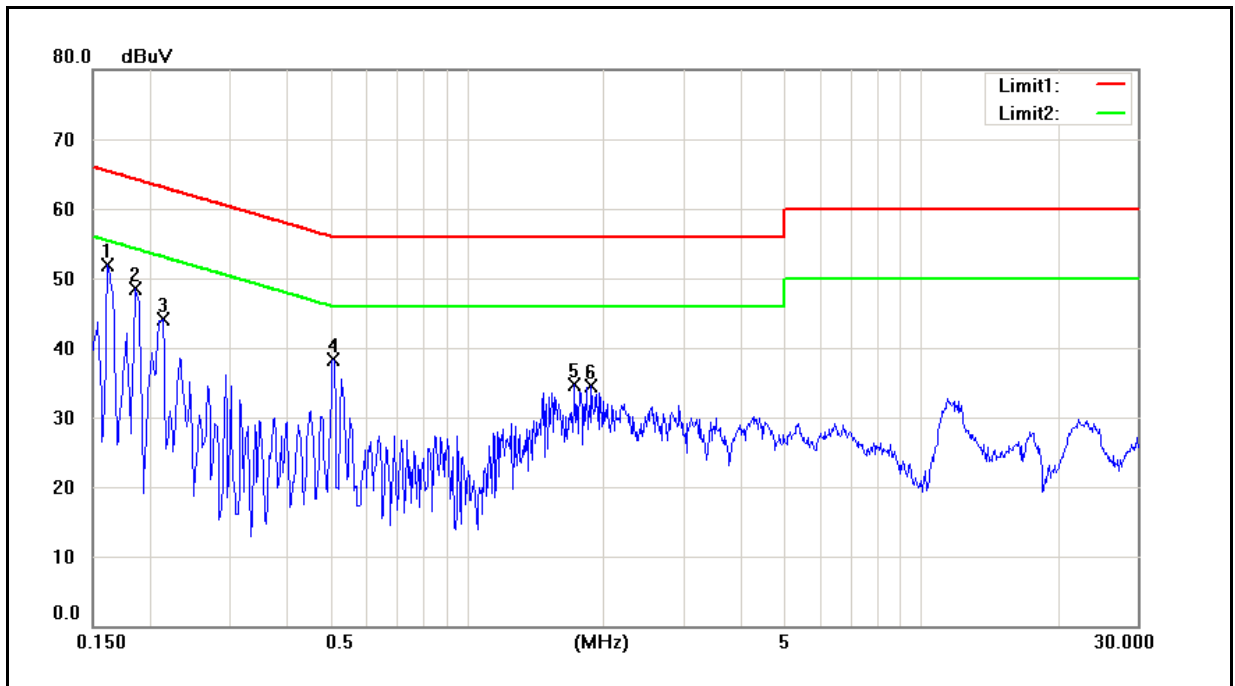
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1	0.1620	40.84	25.55	9.72	50.56	35.27	65.36	55.36	-14.80	-20.09	Pass
2	0.1860	37.32	22.54	9.72	47.04	32.26	64.21	54.21	-17.17	-21.95	Pass
3	0.2180	31.90	19.64	9.72	41.62	29.36	62.89	52.89	-21.27	-23.53	Pass
4	0.5100	28.77	27.04	9.72	38.49	36.76	56.00	46.00	-17.51	-9.24	Pass
5	1.4740	20.37	14.28	9.76	30.13	24.04	56.00	46.00	-25.87	-21.96	Pass
6	11.4580	18.78	12.28	9.99	28.77	22.27	60.00	50.00	-31.23	-27.73	Pass

Standard:	FCC Part 15B Class B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	4	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



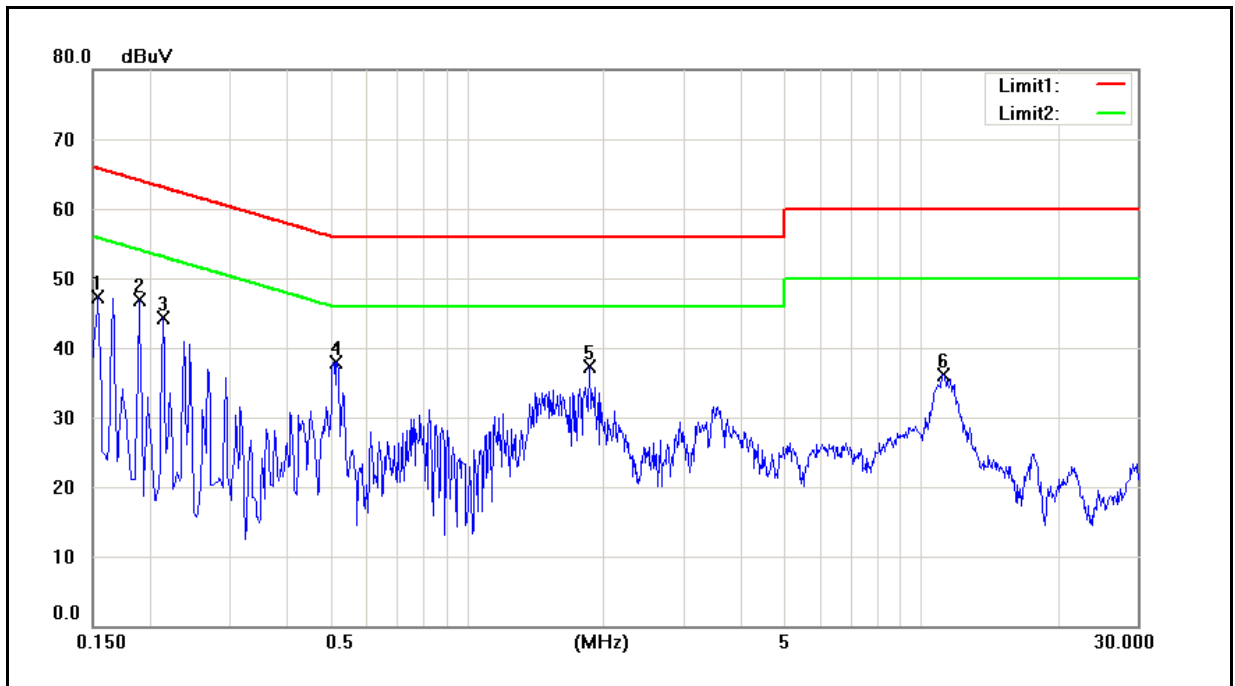
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1	0.1620	40.78	24.85	9.65	50.43	34.50	65.36	55.36	-14.93	-20.86	Pass
2	0.1860	37.02	20.79	9.64	46.66	30.43	64.21	54.21	-17.55	-23.78	Pass
3	0.2420	30.67	17.76	9.64	40.31	27.40	62.03	52.03	-21.72	-24.63	Pass
4	0.5140	26.55	21.58	9.64	36.19	31.22	56.00	46.00	-19.81	-14.78	Pass
5	1.7580	18.15	10.50	9.71	27.86	20.21	56.00	46.00	-28.14	-25.79	Pass
6	11.5060	22.23	15.84	9.98	32.21	25.82	60.00	50.00	-27.79	-24.18	Pass

Standard:	FCC Part 15B Class B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



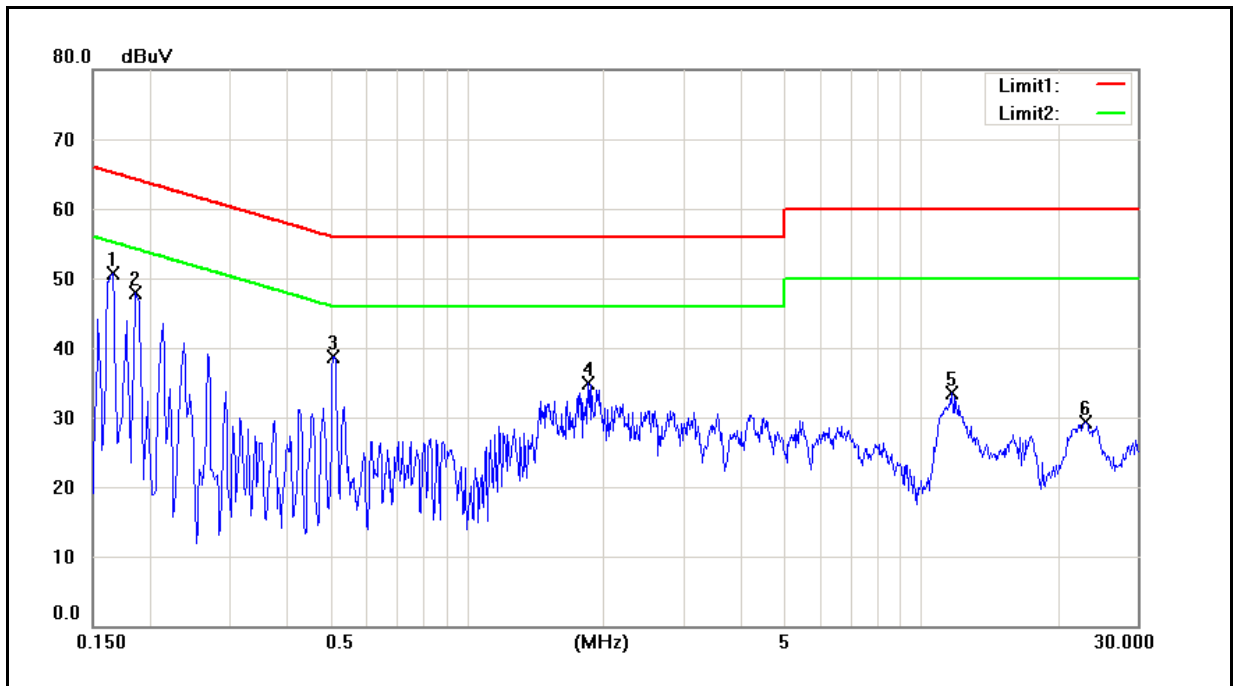
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1	0.1620	40.90	25.52	9.72	50.62	35.24	65.36	55.36	-14.74	-20.12	Pass
2	0.1860	37.79	22.80	9.72	47.51	32.52	64.21	54.21	-16.70	-21.69	Pass
3	0.2140	34.80	21.95	9.72	44.52	31.67	63.05	53.05	-18.53	-21.38	Pass
4	0.5100	28.50	25.77	9.72	38.22	35.49	56.00	46.00	-17.78	-10.51	Pass
5	1.7260	18.39	10.53	9.78	28.17	20.31	56.00	46.00	-27.83	-25.69	Pass
6	1.8820	19.38	12.54	9.80	29.18	22.34	56.00	46.00	-26.82	-23.66	Pass

Standard:	FCC Part 15B Class B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



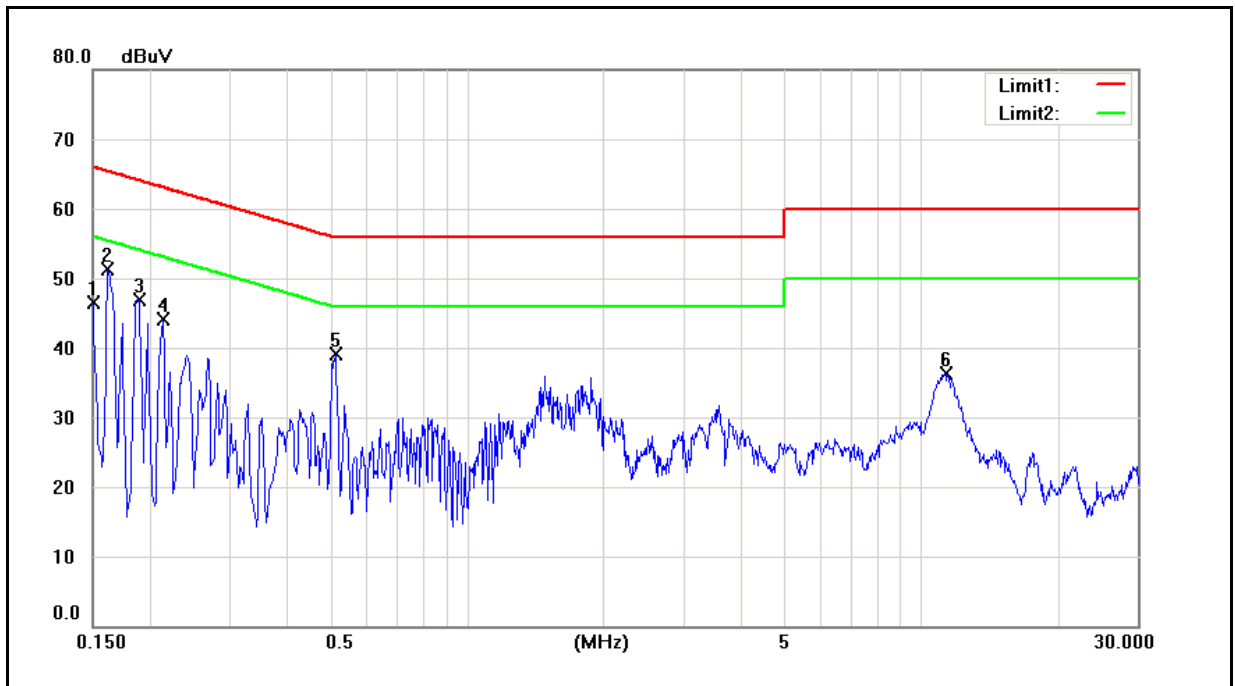
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	32.48	15.24	9.65	42.13	24.89	65.78	55.78	-23.65	-30.89	Pass
2	0.1900	36.52	20.22	9.64	46.16	29.86	64.04	54.04	-17.88	-24.18	Pass
3	0.2140	34.30	19.76	9.64	43.94	29.40	63.05	53.05	-19.11	-23.65	Pass
4	0.5180	24.44	14.17	9.64	34.08	23.81	56.00	46.00	-21.92	-22.19	Pass
5	1.8660	24.12	15.20	9.71	33.83	24.91	56.00	46.00	-22.17	-21.09	Pass
6	11.2060	22.62	16.06	10.02	32.64	26.08	60.00	50.00	-27.36	-23.92	Pass

Standard:	FCC Part 15B Class B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1660	37.96	21.90	9.72	47.68	31.62	65.16	55.16	-17.48	-23.54	Pass
2	0.1860	36.77	22.15	9.72	46.49	31.87	64.21	54.21	-17.72	-22.34	Pass
3	0.5100	28.79	26.91	9.72	38.51	36.63	56.00	46.00	-17.49	-9.37	Pass
4	1.8500	23.20	15.16	9.78	32.98	24.94	56.00	46.00	-23.02	-21.06	Pass
5	11.6940	19.06	12.66	9.95	29.01	22.61	60.00	50.00	-30.99	-27.39	Pass
6	23.0780	15.68	10.39	9.76	25.44	20.15	60.00	50.00	-34.56	-29.85	Pass

Standard:	FCC Part 15B Class B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6	Date:	12/11/2012
		Test By:	Frank Lin
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1500	30.32	7.40	9.65	39.97	17.05	66.00	56.00	-26.03	-38.95	Pass
2	0.1620	40.74	24.71	9.65	50.39	34.36	65.36	55.36	-14.97	-21.00	Pass
3	0.1900	36.73	20.93	9.64	46.37	30.57	64.04	54.04	-17.67	-23.47	Pass
4	0.2140	33.84	18.93	9.64	43.48	28.57	63.05	53.05	-19.57	-24.48	Pass
5	0.5140	27.60	24.46	9.64	37.24	34.10	56.00	46.00	-18.76	-11.90	Pass
6	11.3540	22.66	15.96	10.00	32.66	25.96	60.00	50.00	-27.34	-24.04	Pass

4.2. Radiated Interference Measurement

4.2.1. Limit

Under 1GHz test shall not exceed following value

FCC 47 CFR PART 15 SUBPART B				
Frequency range (MHz)	Class A		Class B	
	Distance (m)	dBuV/m	Distance (m)	dBuV/m
30 to 88	10	39	3	40
88 to 216	10	43.5	3	43.5
216 to 960	10	46.4	3	46
Above 960	10	49.5	3	54

CISPR 22				
Frequency range (MHz)	Class A		Class B	
	Distance (m)	dBuV/m	Distance (m)	dBuV/m
30 to 230	10	40	10	30
230 to 1000	10	47	10	37

Above 1GHz test shall not exceed following value

Frequency (MHz)	dBuV/m (Distance 3m)			
	Class A		Class B	
	Average	Peak	Average	Peak
1000 ~ 40000	60	80	54	74

- 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. Peak detector limit is corresponding to 20 dB above the maximum permitted average limit.

4.2.2. Test Instruments

10 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Pre Amplifier	Agilent	8447D	2944A11120	01/10/2012	(1)
Pre Amplifier	Agilent	8447D	2944A11119	01/10/2012	(1)
Test Receiver	R&S	ESCI	100722	10/18/2012	(1)
Test Receiver	R&S	ESCI	101000	12/26/2011	(1)
Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB 9160	9160-3268	06/06/2012	(1)
Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB 9160	9160-3273	12/27/2011	(1)
Test Site	ATL	TE06	TE06	08/13/2012	(1)

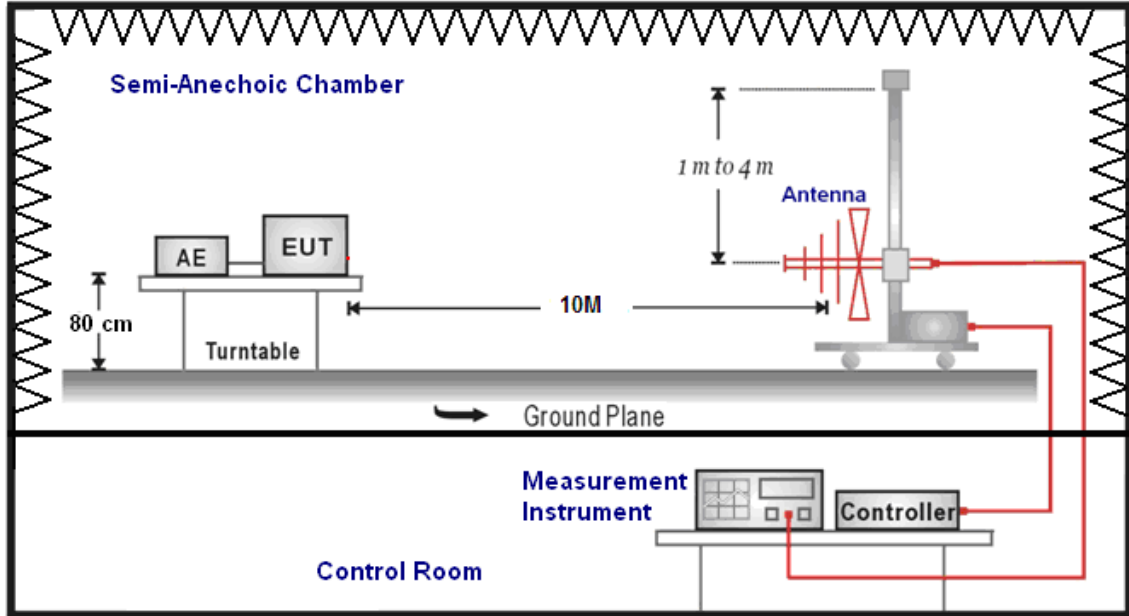
3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/10/2012	(1)
Amplifier	Mini-Circuits	ZKL-1R5+	072010	05/29/2012	(1)
Amplifier	Mini-Circuits	ZVA-213-S+	467900926	05/29/2012	(1)
RF Pre-selector	Agilent	N9039A	MY46520255	05/10/2012	(1)
Horn Antenna (1~18GHz)	ETS-Lindgren	3117	00128055	08/09/2012	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/21/2012	(1)
Test Site	ATL	TE09	TE09	05/11/2012	(1)

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

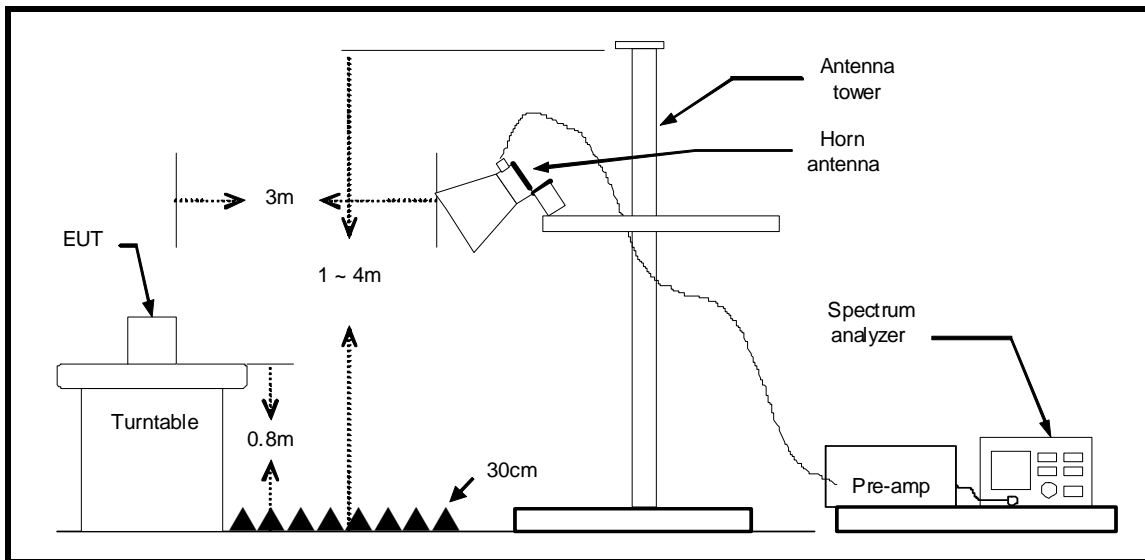
Note: N.C.R. = No Calibration Request.

4.2.3. Setup

Below 1GHz



Above 1GHz



4.2.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

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 for under 1GHz, and 3 meter for above 1GHz, the highest frequency performed according to internal source frequency of the EUT, the specification was below:

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

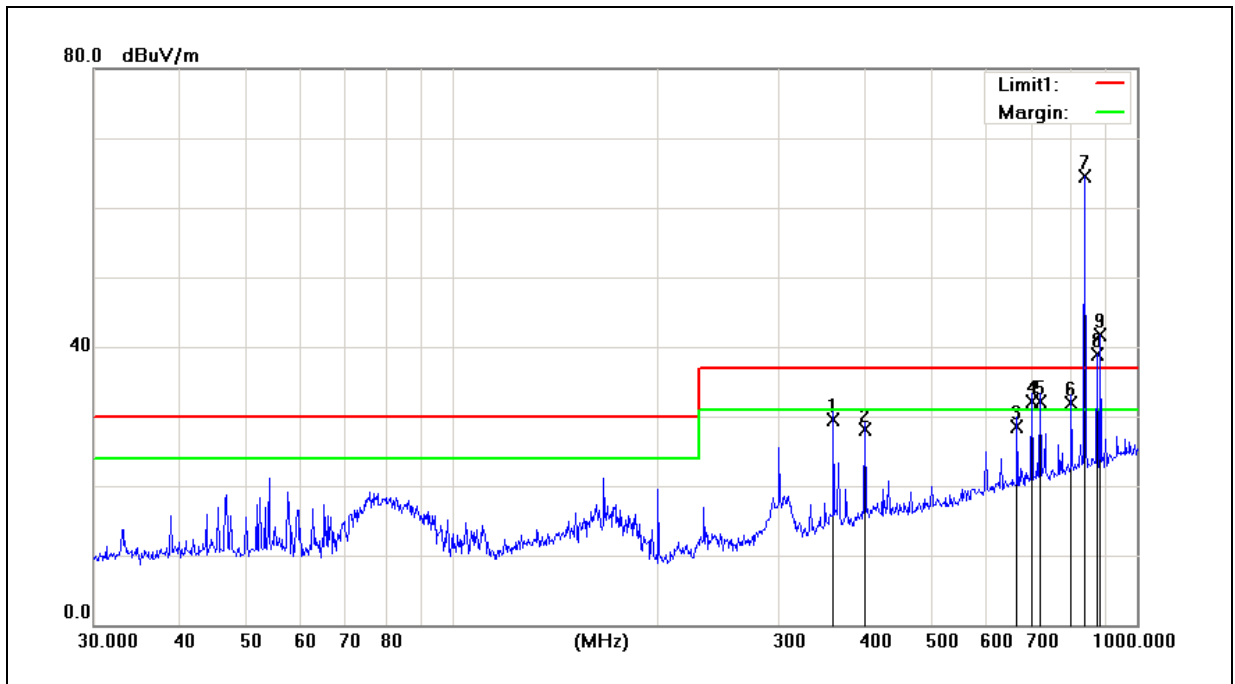
According to this standard paragraph 15.109, as an alternative to the radiated emission limits, digital devices may be shown to comply with the standards contained in Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement".

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.

Radiated emissions were investigated over the frequency range from 30MHz to 1GHz using a receiver bandwidth of 120 kHz. Radiated was performed at an antenna to EUT distance of 10 meters.

4.2.5. Test Result

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



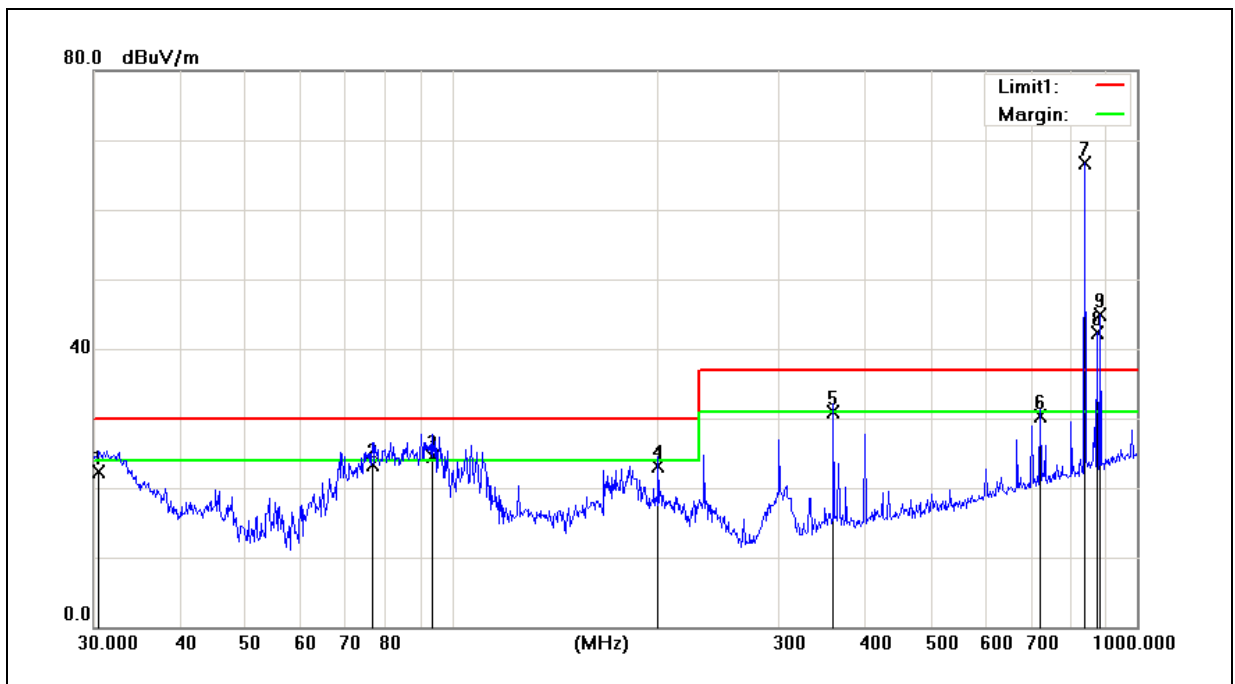
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	360.4476	40.06	-10.56	29.50	37.00	-7.50	300	79	QP
2	400.4320	37.80	-9.70	28.10	37.00	-8.90	300	338	QP
3	668.1423	33.09	-4.49	28.60	37.00	-8.40	100	263	QP
4	701.7610	35.95	-3.85	32.10	37.00	-4.90	100	257	QP
5	721.7260	35.73	-3.53	32.20	37.00	-4.80	162	0	QP
6	801.7863	34.03	-2.03	32.00	37.00	-5.00	100	193	QP
7	839.1817	66.01	-1.53	64.48	N/A	N/A	200	125	TX
8	875.2470	39.86	-0.88	38.98	N/A	N/A	100	2	BS
9	884.5028	42.46	-0.73	41.73	N/A	N/A	100	75	RX

Note: TX: the transmitting signal of Universal Radio Communication Tester.

RX: the receiving signal of Universal Radio Communication Tester.

BS: the signal of Universal Radio Communication Tester.

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



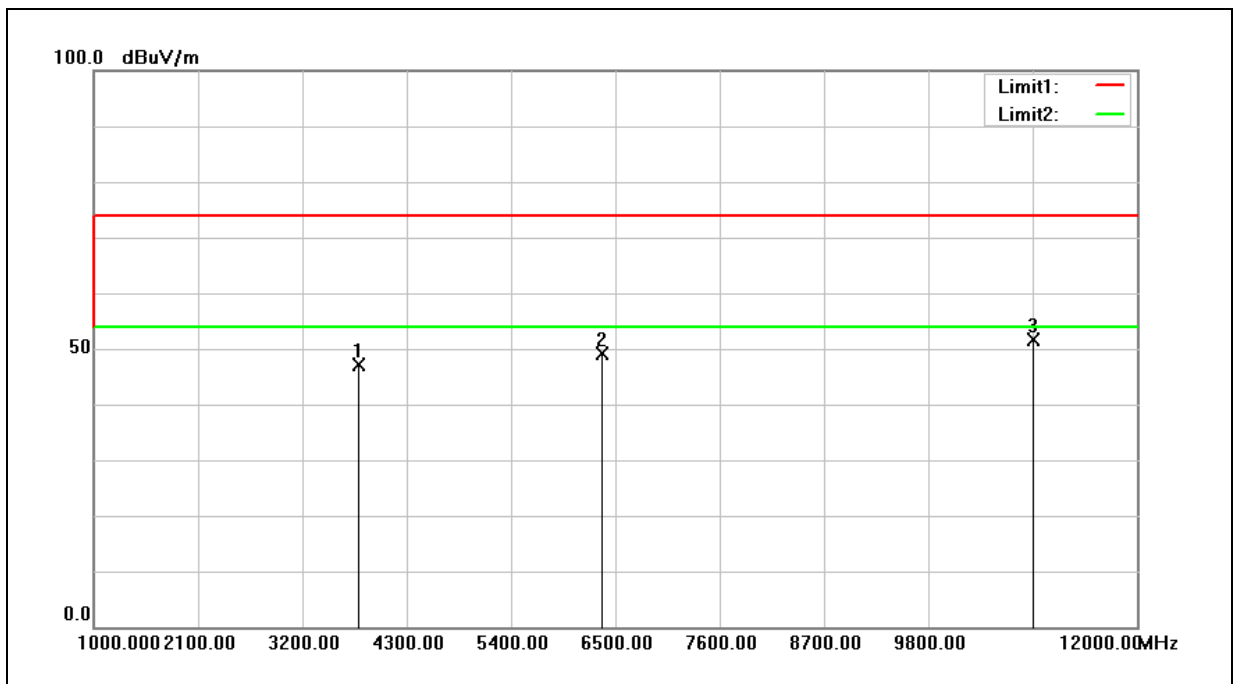
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	30.5306	37.73	-15.43	22.30	30.00	-7.70	100	109	QP
2	76.5121	40.85	-17.45	23.40	30.00	-6.60	100	40	QP
3	93.4402	42.66	-18.16	24.50	30.00	-5.50	200	76	QP
4	199.9856	38.59	-15.39	23.20	30.00	-6.80	119	0	QP
5	360.4476	40.62	-9.62	31.00	37.00	-6.00	100	46	QP
6	721.7260	32.23	-1.93	30.30	37.00	-6.70	100	21	QP
7	839.1817	66.42	0.21	66.63	N/A	N/A	100	124	TX
8	875.2470	41.37	0.87	42.24	N/A	N/A	200	241	BS
9	884.5028	43.89	1.00	44.89	N/A	N/A	100	25	RX

Note: TX: the transmitting signal of Universal Radio Communication Tester.

RX: the receiving signal of Universal Radio Communication Tester.

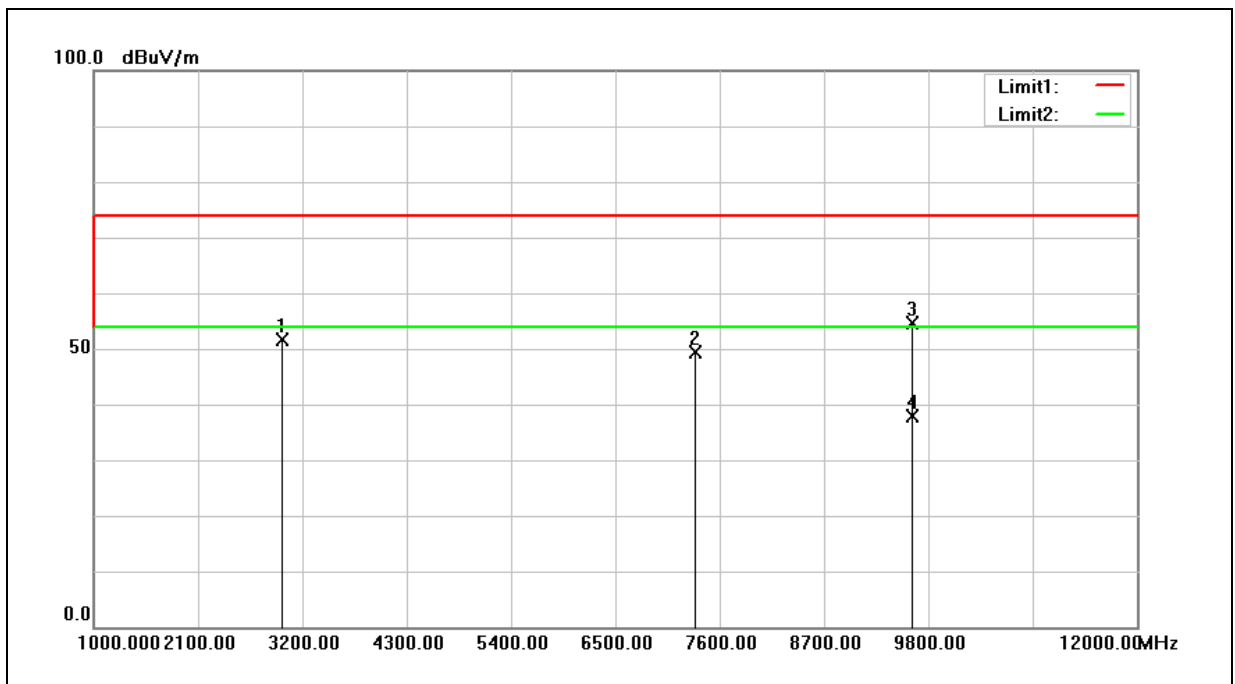
BS: the signal of Universal Radio Communication Tester.

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



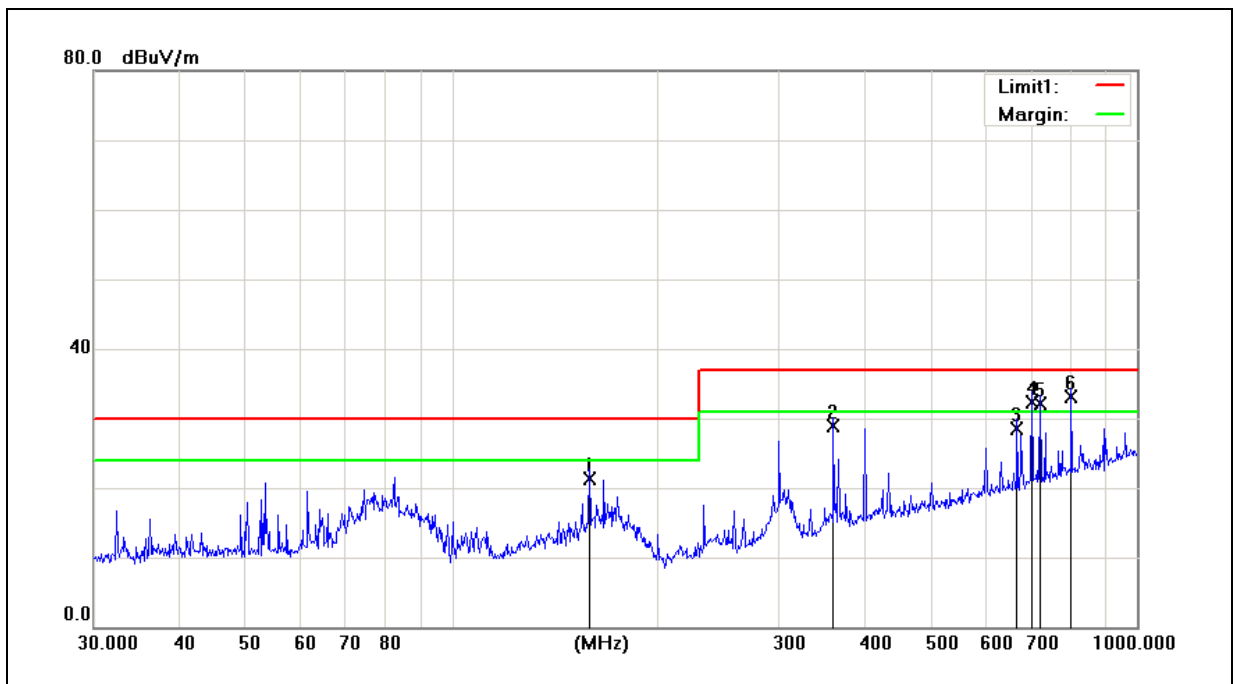
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3794.000	62.29	-15.17	47.12	74.00	-26.88	peak
2	6357.000	58.76	-9.53	49.23	74.00	-24.77	peak
3	10900.000	54.06	-2.34	51.72	74.00	-22.28	peak

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



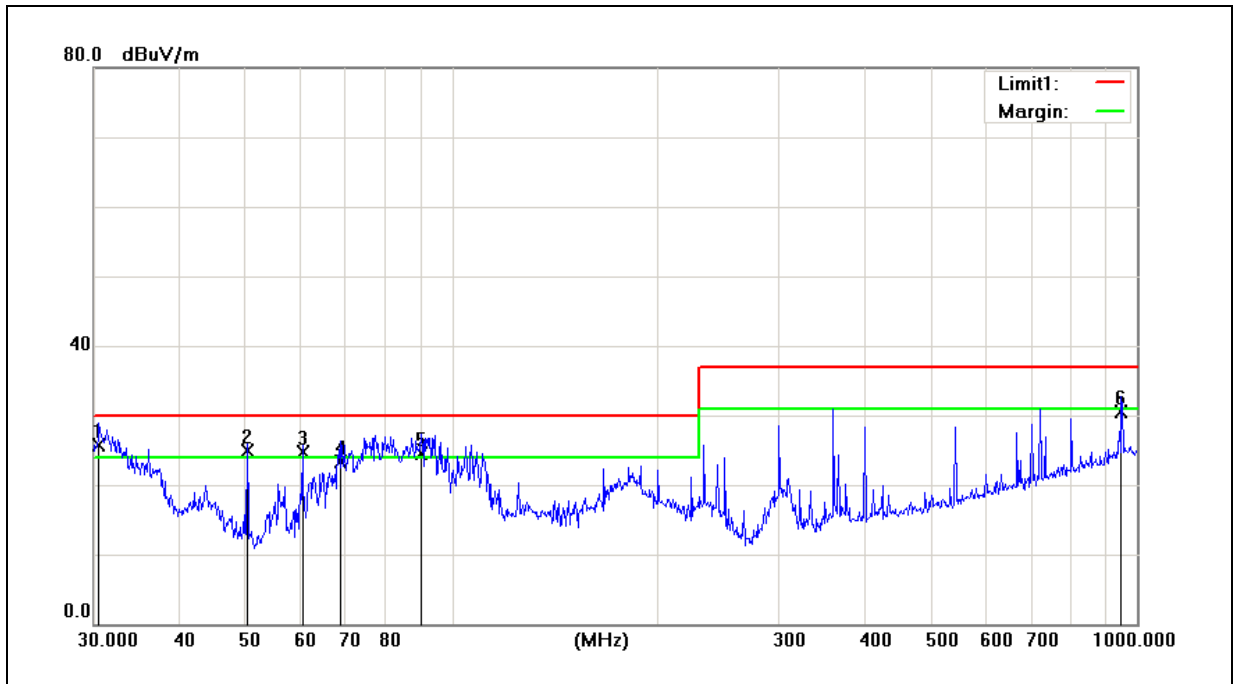
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2991.000	68.26	-16.69	51.57	74.00	-22.43	peak
2	7347.000	57.64	-8.33	49.31	74.00	-24.69	peak
3	9635.000	59.52	-4.94	54.58	74.00	-19.42	peak
3	9635.000	42.94	-4.94	38.00	54.00	-16.00	AVG

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



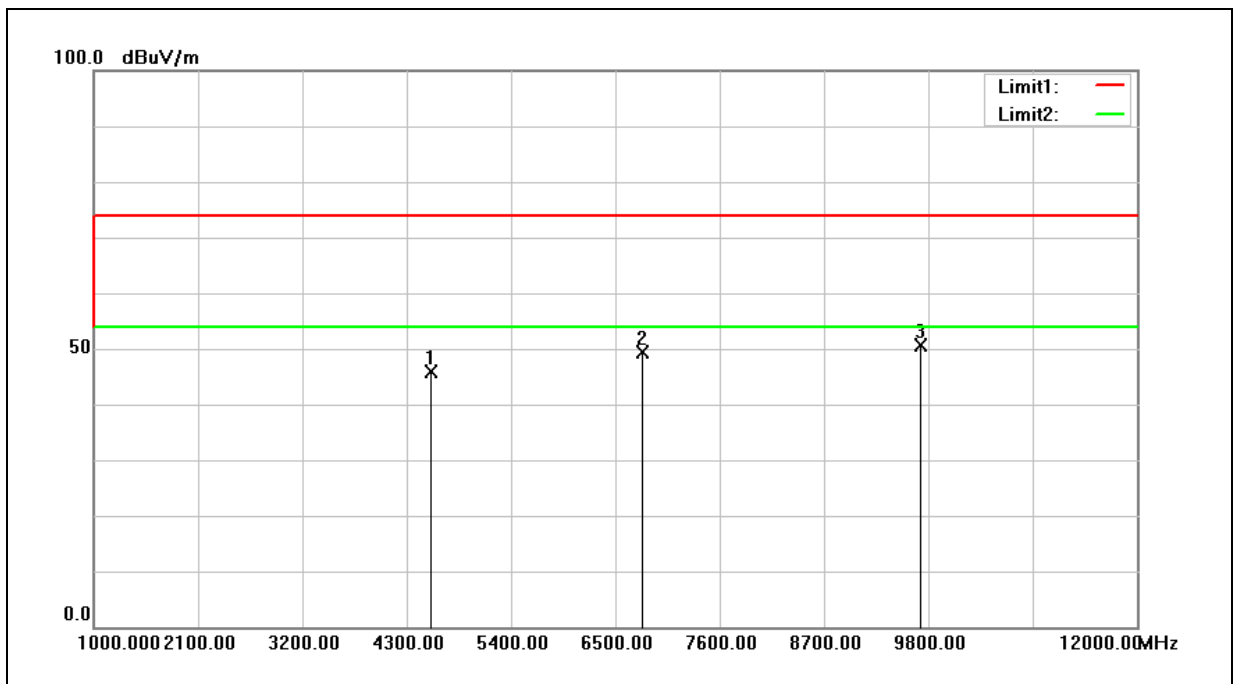
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	158.6677	34.17	-12.77	21.40	30.00	-8.60	380	0	QP
2	360.4476	39.46	-10.56	28.90	37.00	-8.10	400	72	QP
3	668.1422	32.99	-4.49	28.50	37.00	-8.50	100	154	QP
4	701.7610	36.25	-3.85	32.40	37.00	-4.60	100	248	QP
5	721.7260	35.63	-3.53	32.10	37.00	-4.90	400	282	QP
6	801.7863	35.23	-2.03	33.20	37.00	-3.80	100	186	QP

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



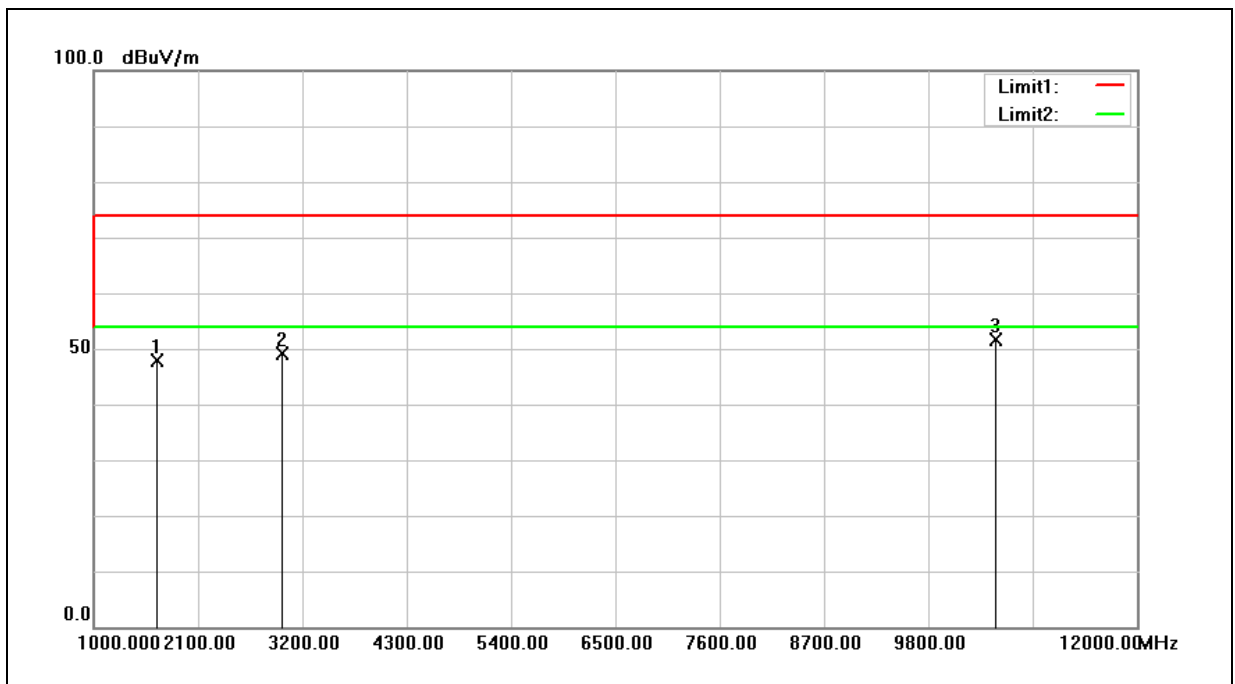
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	30.5306	41.23	-15.43	25.80	30.00	-4.20	101	0	QP
2	50.2324	39.32	-14.32	25.00	30.00	-5.00	400	260	QP
3	60.4920	39.57	-14.77	24.80	30.00	-5.20	201	360	QP
4	68.8721	39.33	-15.93	23.40	30.00	-6.60	200	80	QP
5	90.2205	43.23	-18.73	24.50	30.00	-5.50	200	0	QP
6	948.7610	27.78	2.72	30.50	37.00	-6.50	100	343	QP

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



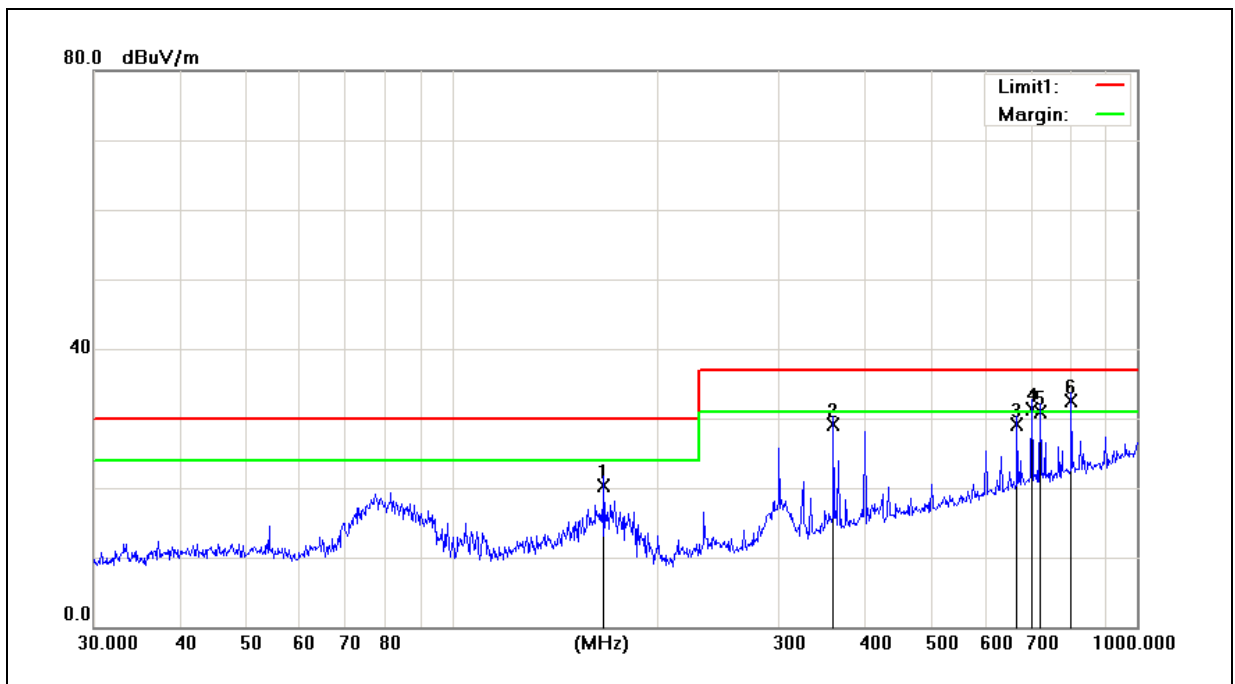
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4553.000	58.89	-13.09	45.80	74.00	-28.20	peak
2	6786.000	58.32	-8.99	49.33	74.00	-24.67	peak
3	9723.000	55.36	-4.70	50.66	74.00	-23.34	peak

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



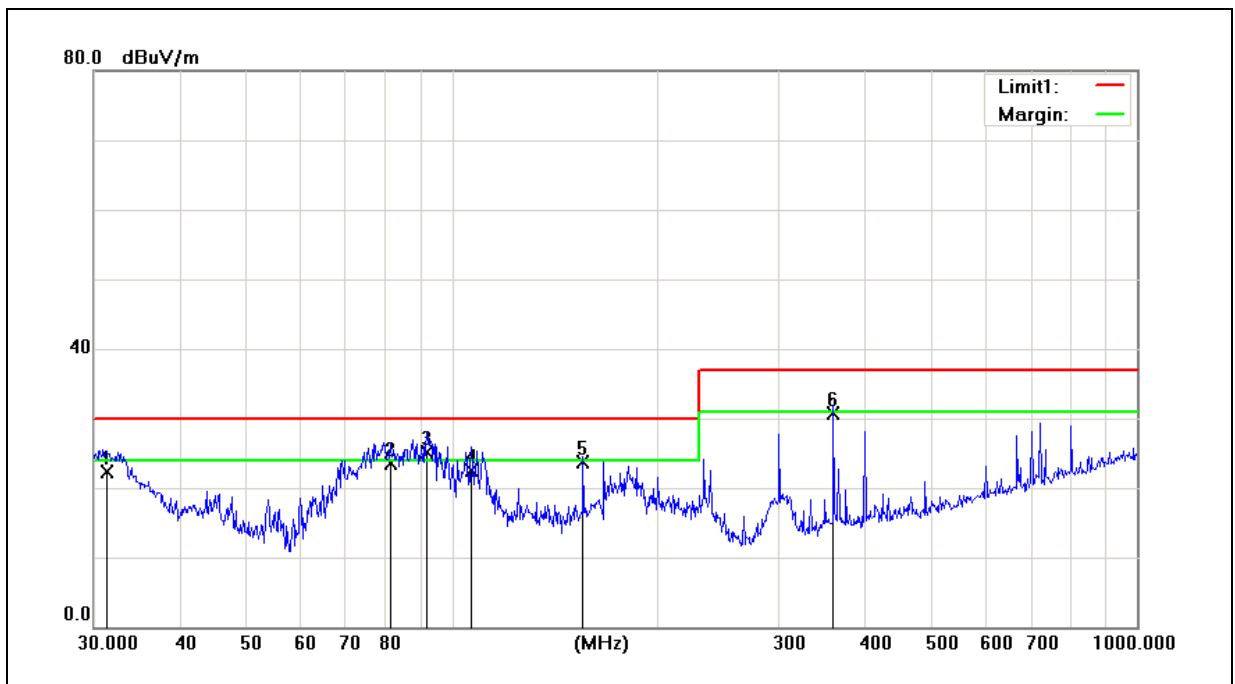
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1671.000	69.58	-21.80	47.78	74.00	-26.22	peak
2	2991.000	65.94	-16.69	49.25	74.00	-24.75	peak
3	10515.000	54.56	-2.86	51.70	74.00	-22.30	peak

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



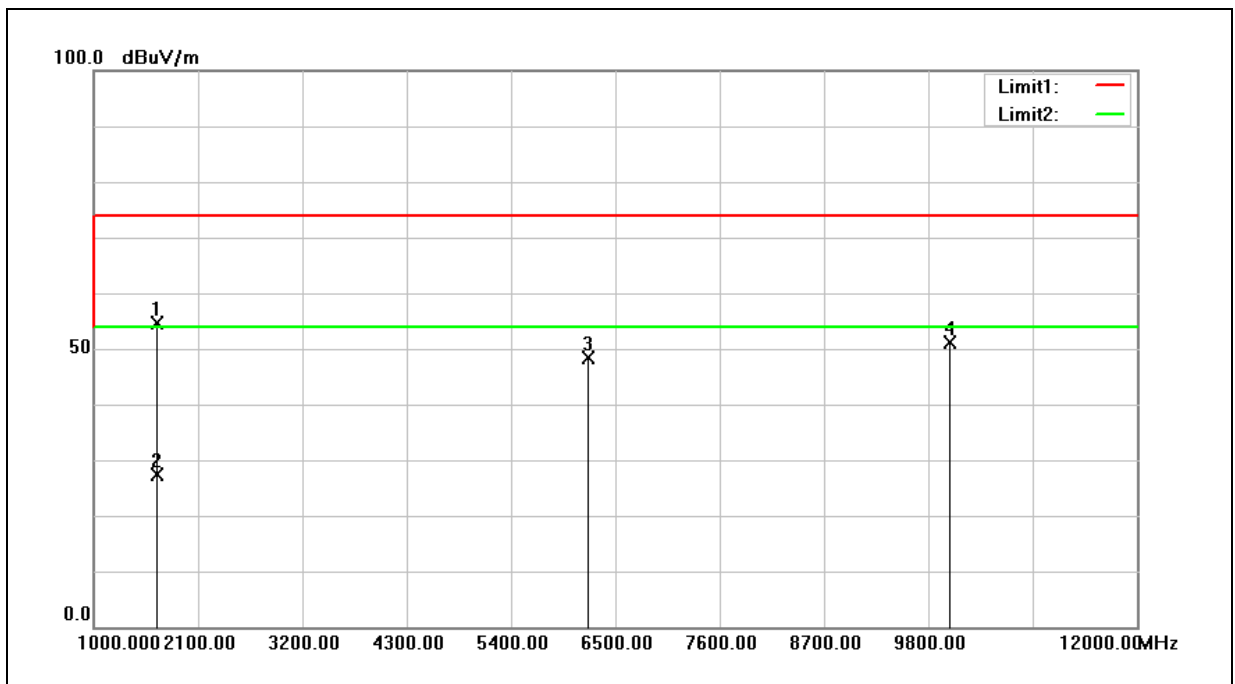
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	166.6514	33.40	-13.00	20.40	30.00	-9.60	400	279	QP
2	360.4476	39.66	-10.56	29.10	37.00	-7.90	200	75	QP
3	668.1423	33.69	-4.49	29.20	37.00	-7.80	100	262	QP
4	701.7610	35.25	-3.85	31.40	37.00	-5.60	100	256	QP
5	721.7260	34.53	-3.53	31.00	37.00	-6.00	100	277	QP
6	801.7863	34.53	-2.03	32.50	37.00	-4.50	100	186	QP

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



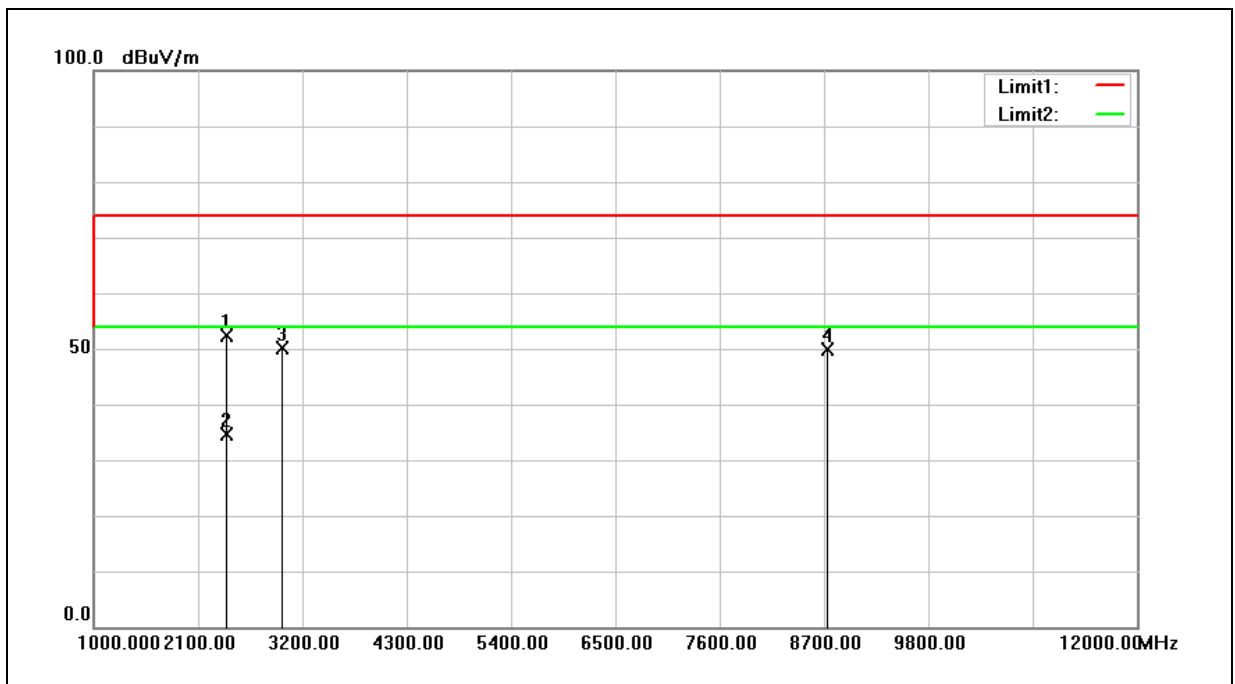
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	31.3992	37.79	-15.39	22.40	30.00	-7.60	100	151	QP
2	81.2117	41.73	-18.23	23.50	30.00	-6.50	200	42	QP
3	91.8163	43.64	-18.44	25.20	30.00	-4.80	200	80	QP
4	106.7587	38.40	-15.80	22.60	30.00	-7.40	195	0	QP
5	155.3644	36.37	-12.57	23.80	30.00	-6.20	400	198	QP
6	360.4476	40.32	-9.62	30.70	37.00	-6.30	100	47	QP

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



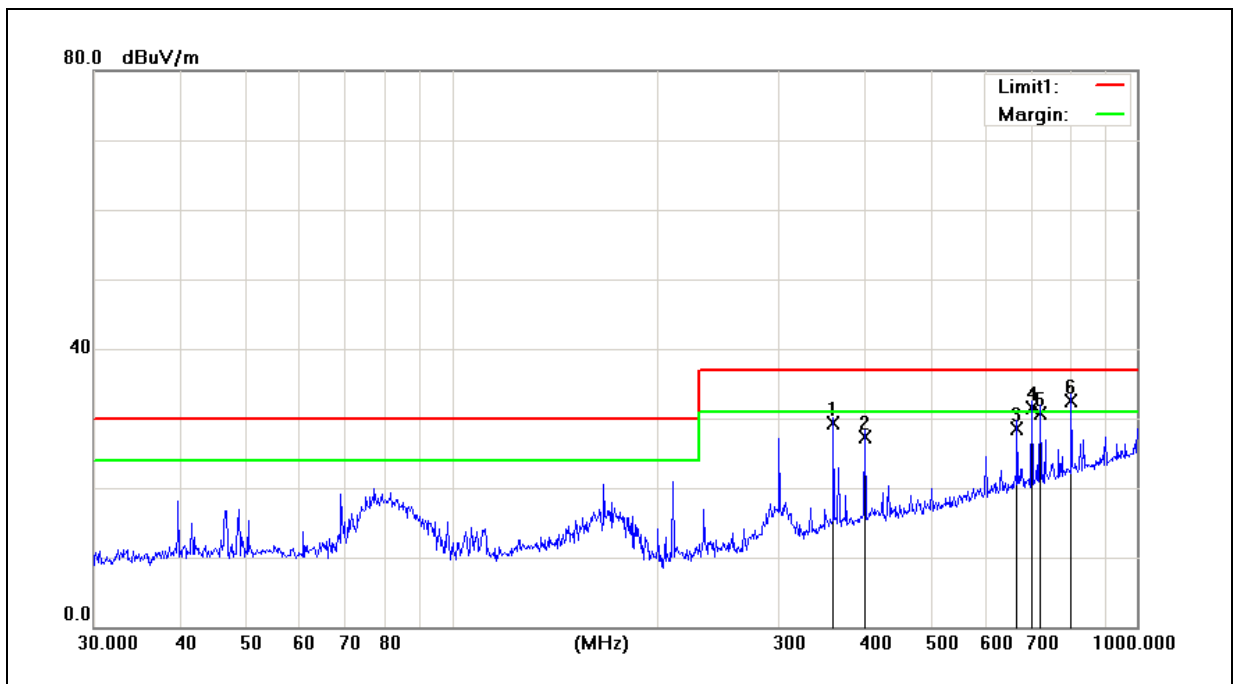
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1660.000	76.56	-21.88	54.68	74.00	-19.32	peak
2	1660.000	49.38	-21.88	27.50	54.00	-26.50	AVG
3	6214.000	58.07	-9.72	48.35	74.00	-25.65	peak
4	10031.000	54.97	-3.83	51.14	74.00	-22.86	peak

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



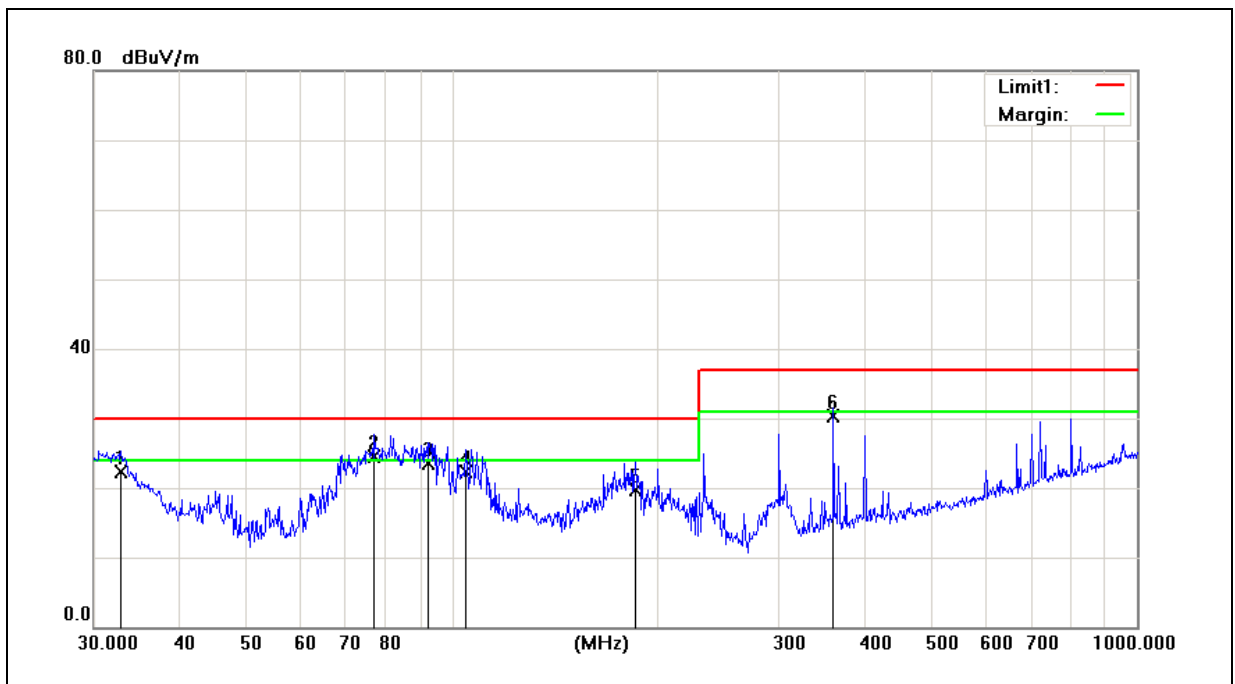
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2397.000	70.85	-18.40	52.45	74.00	-21.55	peak
2	2397.000	52.99	-18.40	34.59	54.00	-19.41	AVG
3	2991.000	66.88	-16.69	50.19	74.00	-23.81	peak
4	8733.000	56.33	-6.50	49.83	74.00	-24.17	peak

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	4	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



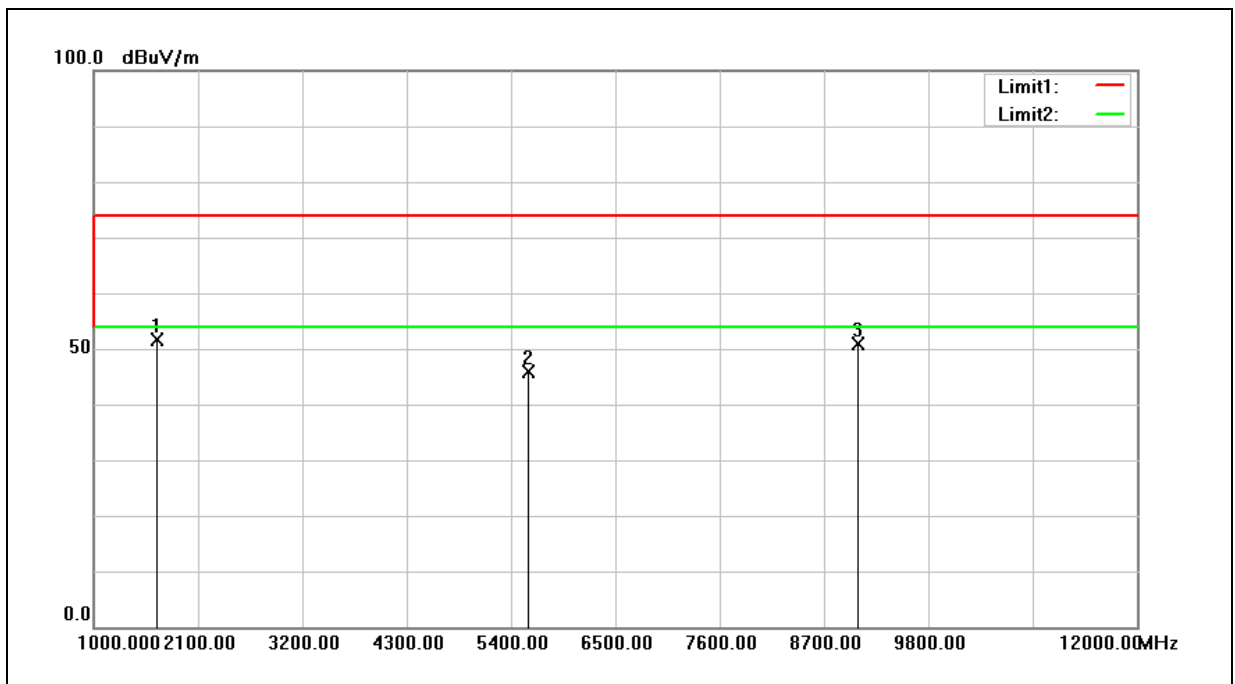
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	360.4476	39.96	-10.56	29.40	37.00	-7.60	400	87	QP
2	400.4320	37.00	-9.70	27.30	37.00	-9.70	200	98	QP
3	668.1423	33.09	-4.49	28.60	37.00	-8.40	100	290	QP
4	701.7610	35.35	-3.85	31.50	37.00	-5.50	100	255	QP
5	721.7260	34.23	-3.53	30.70	37.00	-6.30	100	264	QP
6	801.7863	34.63	-2.03	32.60	37.00	-4.40	100	177	QP

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	4	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



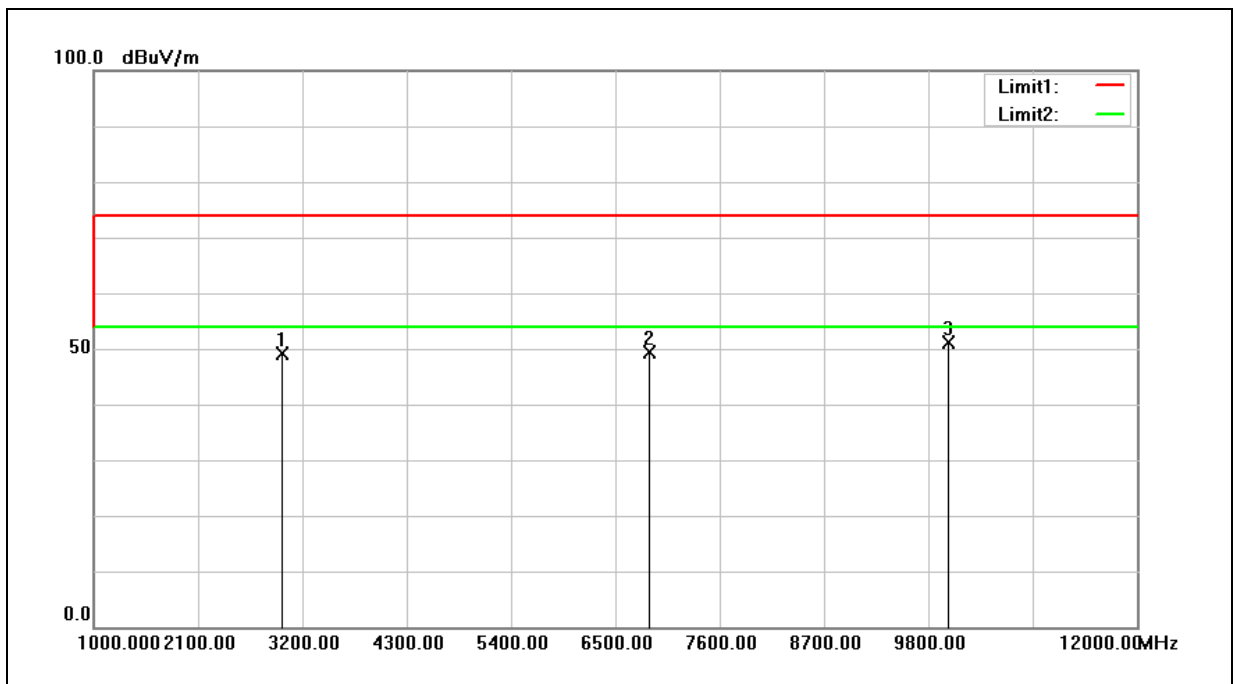
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	32.8637	37.64	-15.34	22.30	30.00	-7.70	100	145	QP
2	77.0505	42.05	-17.55	24.50	30.00	-5.50	200	51	QP
3	92.4624	41.83	-18.33	23.50	30.00	-6.50	200	75	QP
4	104.5361	38.49	-16.19	22.30	30.00	-7.70	155	0	QP
5	185.1380	34.11	-14.31	19.80	30.00	-10.20	102	0	QP
6	360.4476	40.02	-9.62	30.40	37.00	-6.60	100	40	QP

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	4 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



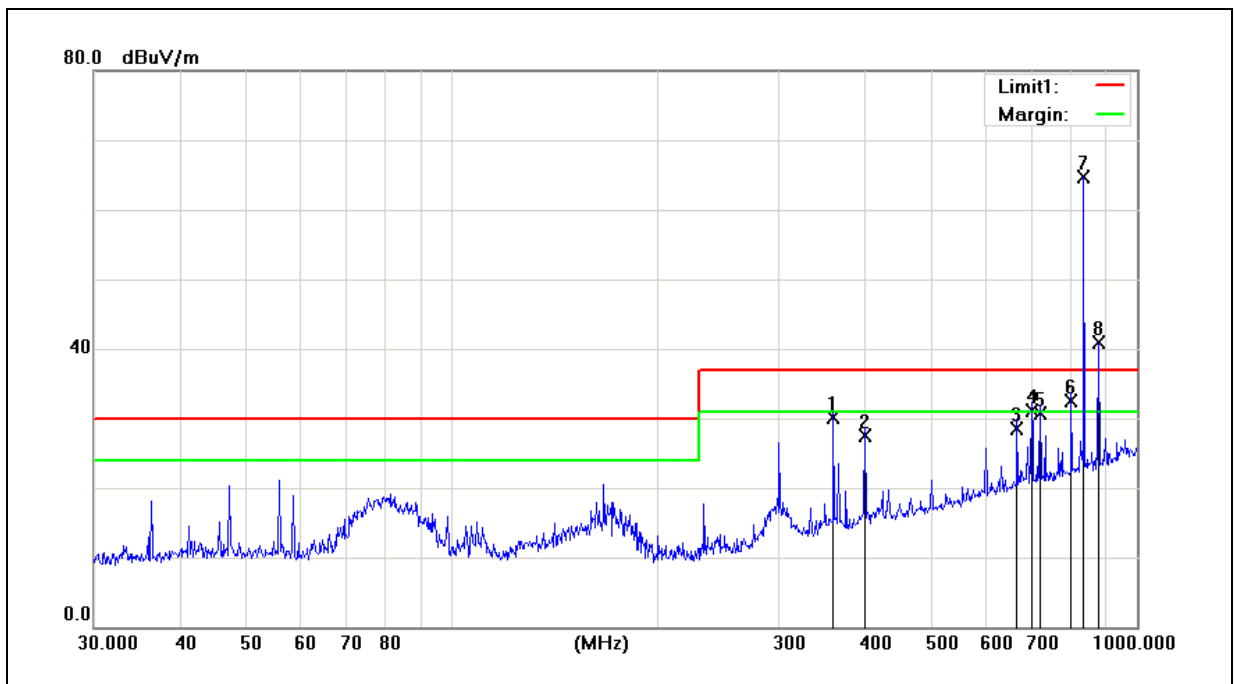
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1671.000	73.33	-21.80	51.53	74.00	-22.47	peak
2	5587.000	57.21	-11.44	45.77	74.00	-28.23	peak
3	9052.000	56.91	-6.03	50.88	74.00	-23.12	peak

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	4 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2991.000	65.83	-16.69	49.14	74.00	-24.86	peak
2	6863.000	58.18	-8.88	49.30	74.00	-24.70	peak
3	10009.000	55.04	-3.87	51.17	74.00	-22.83	peak

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin

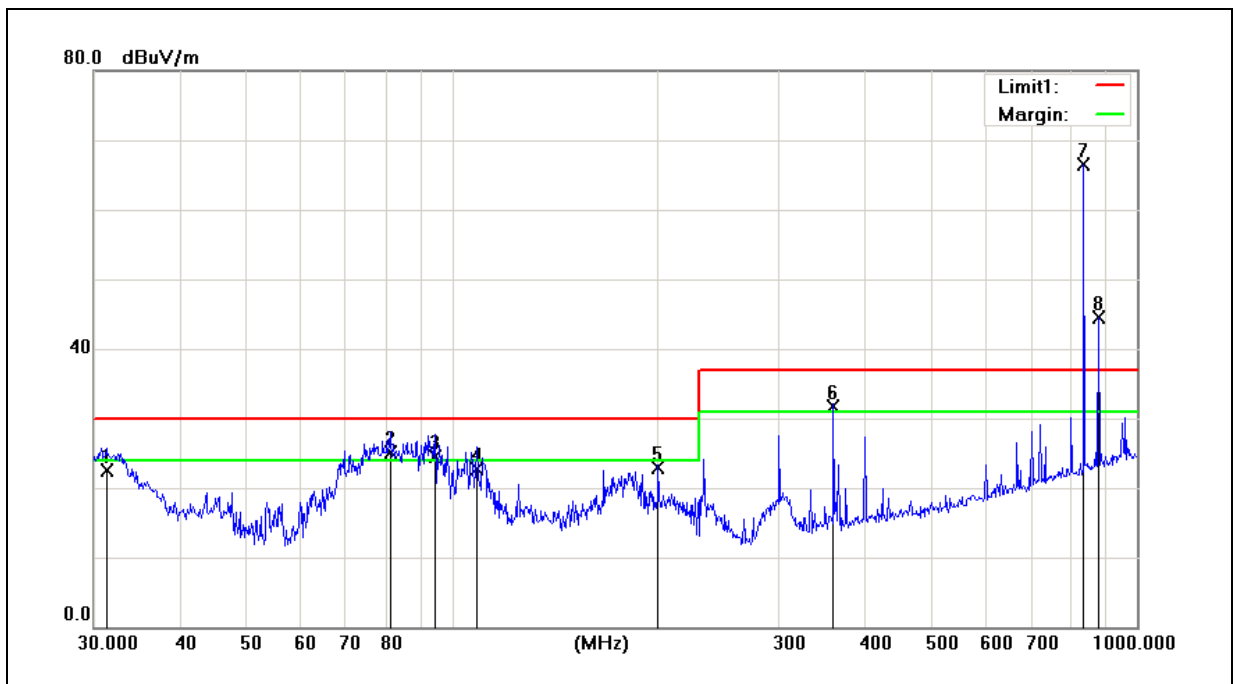


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	360.4476	40.66	-10.56	30.10	37.00	-6.90	300	83	QP
2	400.4320	37.20	-9.70	27.50	37.00	-9.50	200	101	QP
3	668.1423	33.09	-4.49	28.60	37.00	-8.40	200	270	QP
4	701.7610	35.05	-3.85	31.20	37.00	-5.80	100	249	QP
5	721.7260	34.23	-3.53	30.70	37.00	-6.30	100	284	QP
6	801.7863	34.63	-2.03	32.60	37.00	-4.40	100	179	QP
7	836.2441	66.27	-1.59	64.68	N/A	N/A	200	157	TX
8	878.3214	41.72	-0.84	40.88	N/A	N/A	300	225	RX

Note: TX: the transmitting signal of Universal Radio Communication Tester.

RX: the receiving signal of Universal Radio Communication Tester.

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin

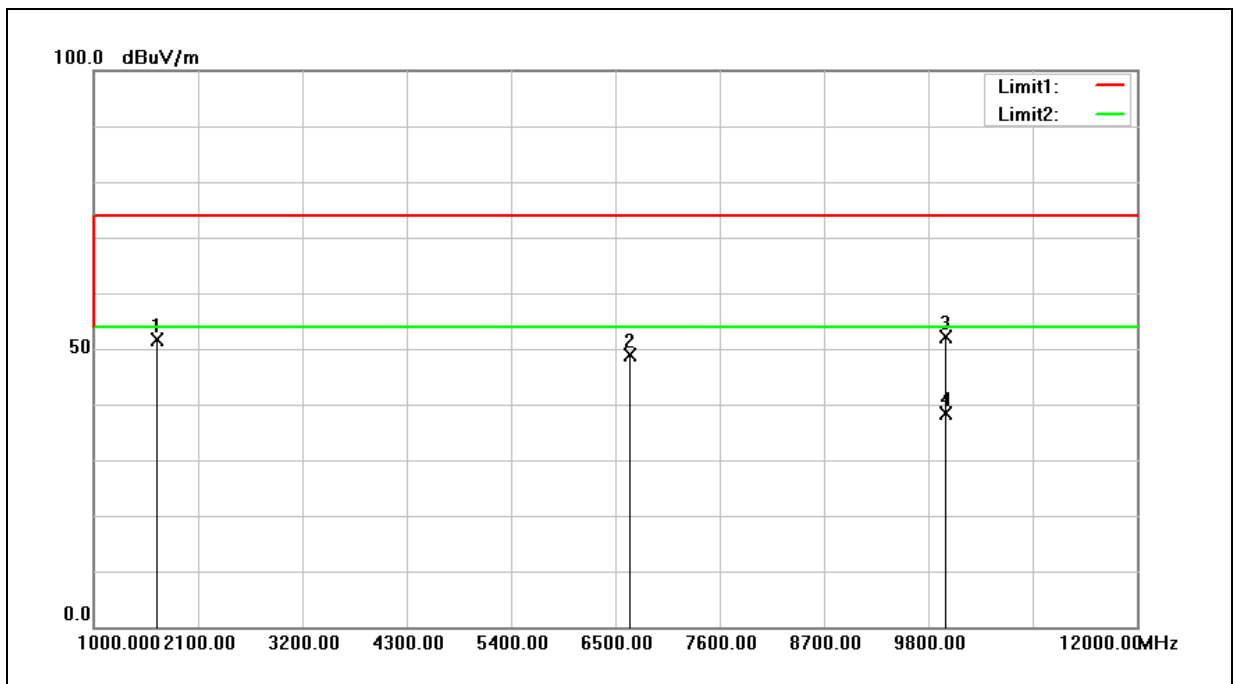


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	31.2893	37.90	-15.40	22.50	30.00	-7.50	100	165	QP
2	81.2117	43.33	-18.23	25.10	30.00	-4.90	200	69	QP
3	94.4284	42.49	-17.99	24.50	30.00	-5.50	200	83	QP
4	108.6470	38.15	-15.45	22.70	30.00	-7.30	101	0	QP
5	199.9856	38.39	-15.39	23.00	30.00	-7.00	100	359	QP
6	360.4476	41.32	-9.62	31.70	37.00	-5.30	100	69	QP
7	836.2441	66.37	0.11	66.48	N/A	N/A	200	157	TX
8	878.3214	43.57	0.91	44.48	N/A	N/A	100	45	RX

Note: TX: the transmitting signal of Universal Radio Communication Tester.

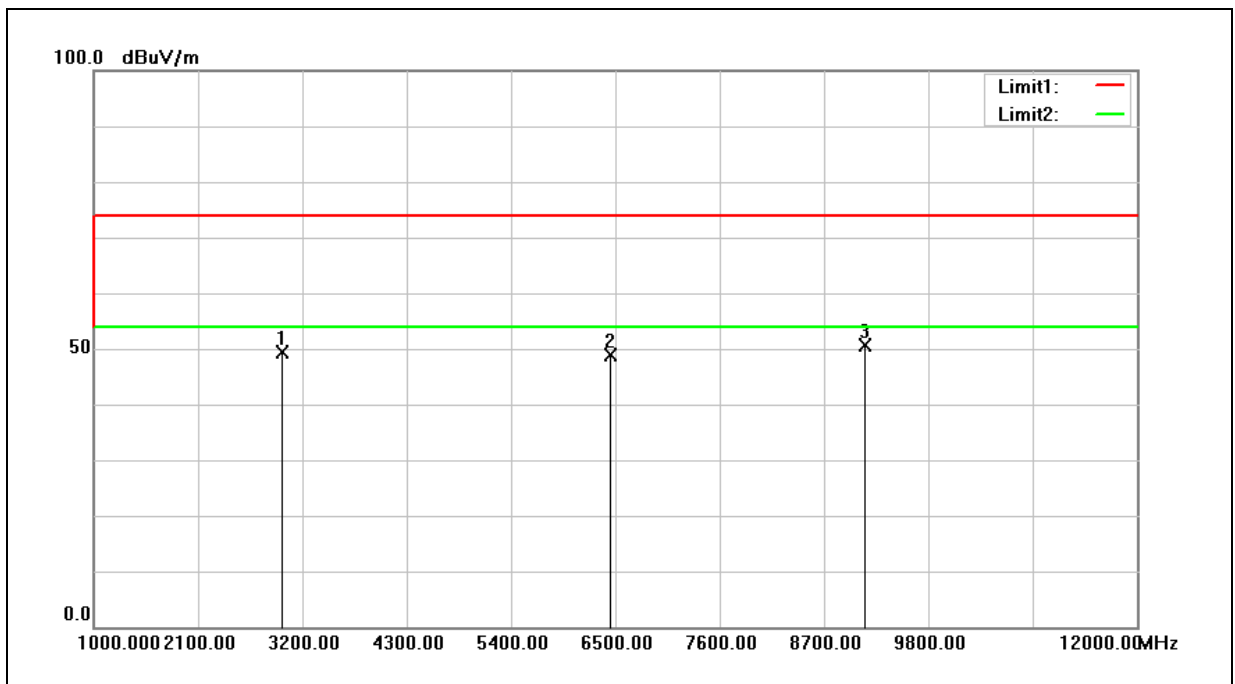
RX: the receiving signal of Universal Radio Communication Tester.

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



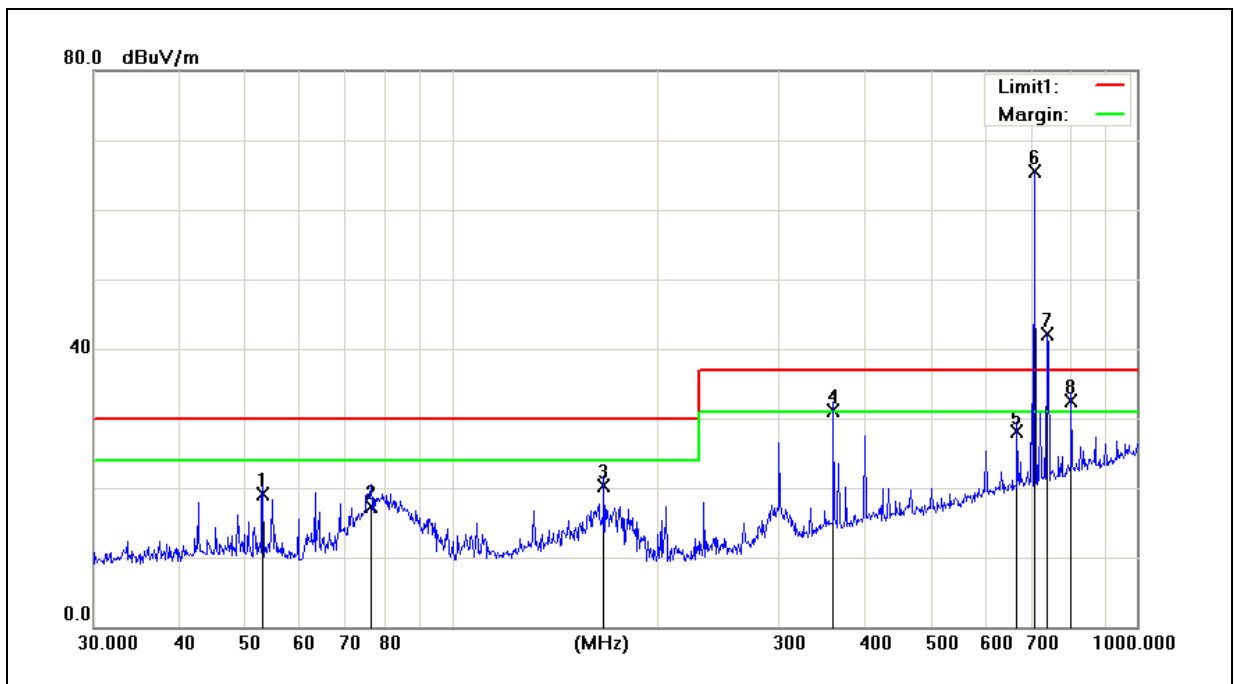
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1660.000	73.63	-21.88	51.75	74.00	-22.25	peak
2	6654.000	58.09	-9.16	48.93	74.00	-25.07	peak
3	9976.000	56.04	-3.97	52.07	74.00	-21.93	peak
4	9976.000	42.23	-3.97	38.26	54.00	-15.74	AVG

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2991.000	66.15	-16.69	49.46	74.00	-24.54	peak
2	6445.000	58.23	-9.43	48.80	74.00	-25.20	peak
3	9129.000	56.46	-5.90	50.56	74.00	-23.44	peak

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin

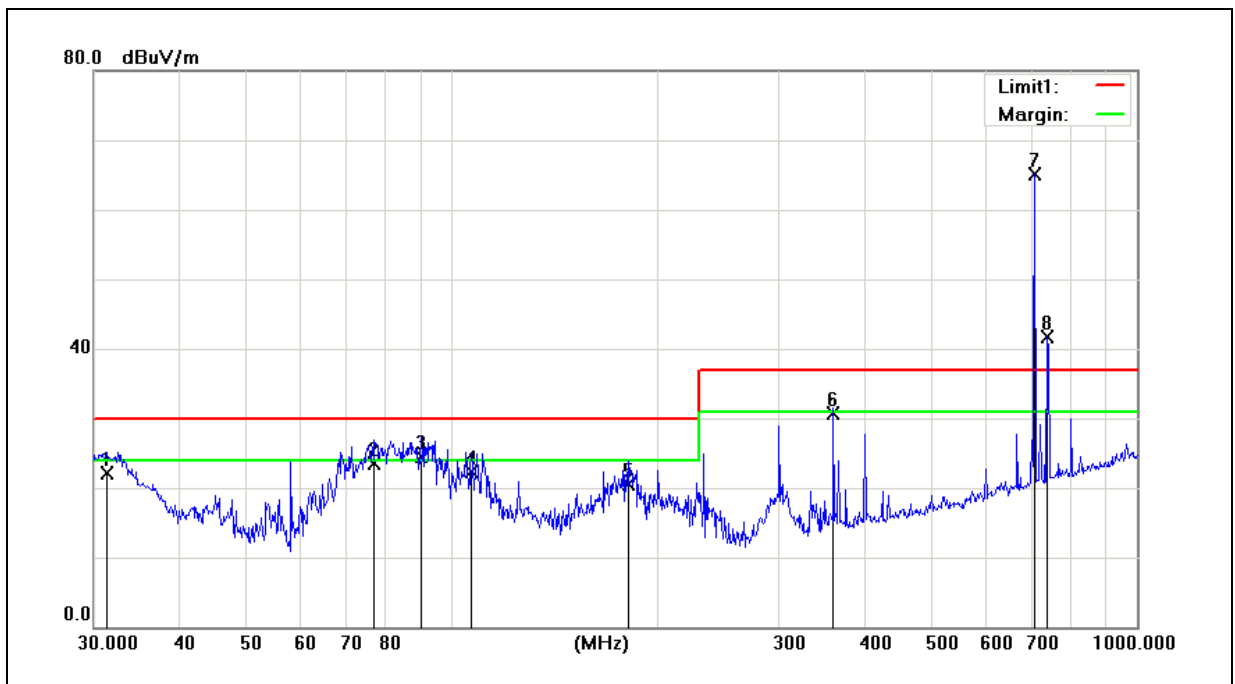


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	52.9453	33.67	-14.47	19.20	30.00	-10.80	100	241	QP
2	76.2442	34.70	-17.40	17.30	30.00	-12.70	100	320	QP
3	166.6514	33.40	-13.00	20.40	30.00	-9.60	400	334	QP
4	360.4476	41.66	-10.56	31.10	37.00	-5.90	300	77	QP
5	668.1423	32.69	-4.49	28.20	37.00	-8.80	100	267	QP
6	709.1823	69.29	-3.70	65.59	N/A	N/A	200	115	TX
7	739.6604	45.14	-3.08	42.06	N/A	N/A	300	247	RX
8	801.7863	34.53	-2.03	32.50	37.00	-4.50	100	182	QP

Note: TX: the transmitting signal of Universal Radio Communication Tester.

RX: the receiving signal of Universal Radio Communication Tester.

Standard:	CISPR 22 Class B	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin

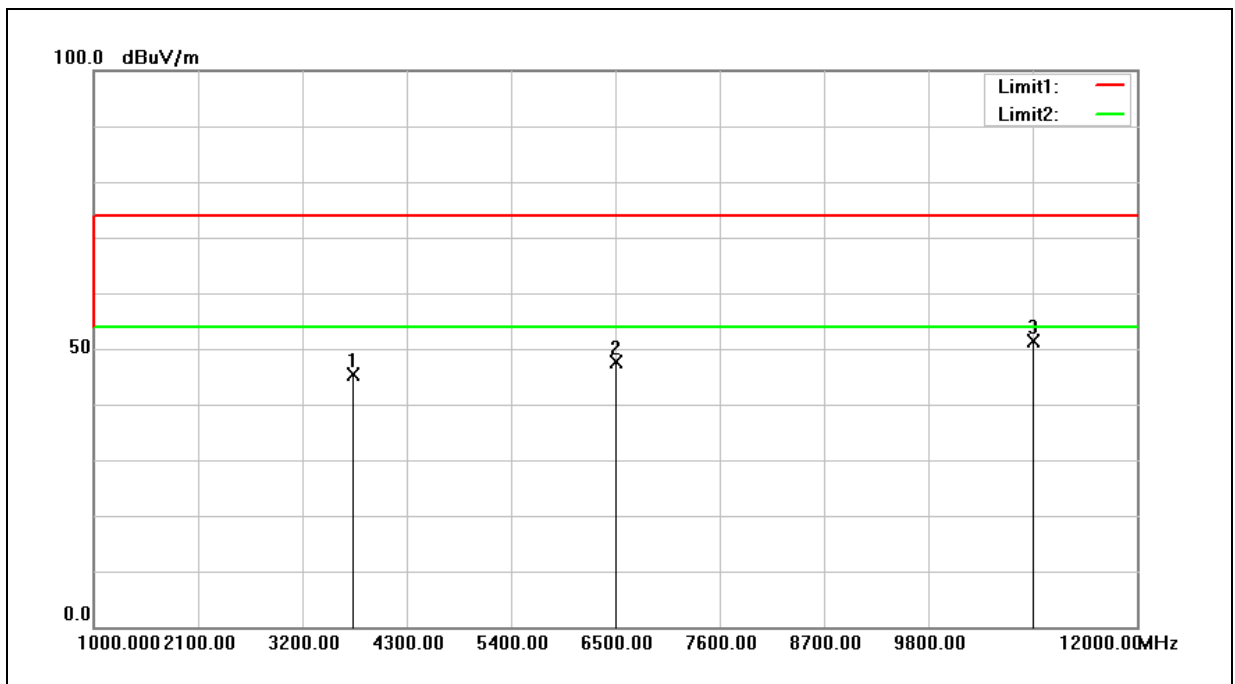


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	31.2893	37.60	-15.40	22.20	30.00	-7.80	100	137	QP
2	77.0505	41.05	-17.55	23.50	30.00	-6.50	200	28	QP
3	90.2205	43.33	-18.73	24.60	30.00	-5.40	200	57	QP
4	106.7587	38.10	-15.80	22.30	30.00	-7.70	200	264	QP
5	181.2834	34.29	-13.79	20.50	30.00	-9.50	100	340	QP
6	360.4476	40.32	-9.62	30.70	37.00	-6.30	100	61	QP
7	709.1823	67.31	-2.24	65.07	N/A	N/A	200	115	TX
8	739.6604	43.22	-1.58	41.64	N/A	N/A	220	0	RX

Note: TX: the transmitting signal of Universal Radio Communication Tester.

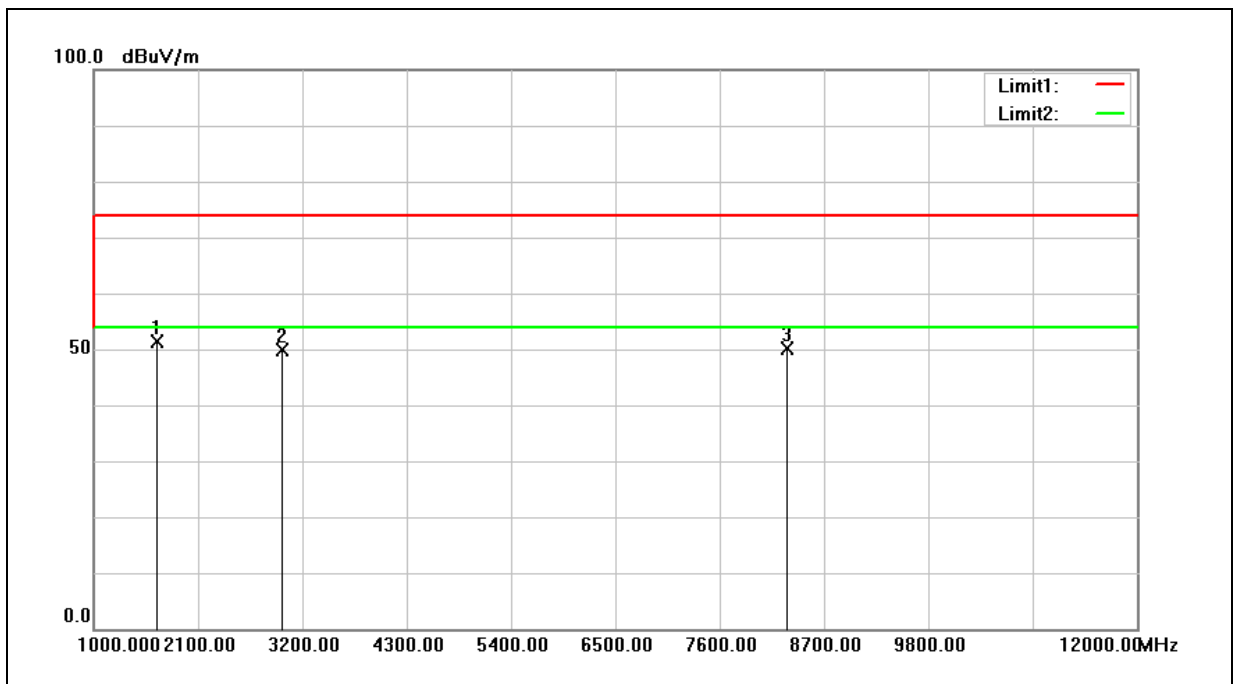
RX: the receiving signal of Universal Radio Communication Tester.

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Horizontal	Test By:	Frank Lin



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3728.000	60.80	-15.39	45.41	74.00	-28.59	peak
2	6511.000	56.99	-9.35	47.64	74.00	-26.36	peak
3	10900.000	53.63	-2.34	51.29	74.00	-22.71	peak

Standard:	FCC Part 15B Class B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60HZ
Model Number:	IPn4G	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6 (1GHz~12GHz)	Date:	12/11/2012
Ant.Polar.:	Vertical	Test By:	Frank Lin



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1660.000	73.35	-21.88	51.47	74.00	-22.53	peak
2	2991.000	66.49	-16.69	49.80	74.00	-24.20	peak
3	8304.000	57.40	-7.17	50.23	74.00	-23.77	peak