Registration Num:428261

Report No.: RZA2010-1143EMC15B

TESTING
No. L2264

Part 15B

TEST REPORT

Product Name	modu W
FCC ID	WQKW1000
Model	modu W
Applicant	modu LTD.

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Product Name	modu W	**Model**	modu W
FCC ID	WQKW1000	**Report No.**	RZA2010-1143EMC15B
Client	modu LTD.		
Manufacturer	YuHua TelTech(Shanghai) Co., Ltd.		
Reference Standard(s)	**FCC Part 15 Subpart B (2009-12)** Radio frequency device. **ANSI C63.4 (2003)** Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40GHz.		
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards. General Judgment : **Pass** **(Stamp)** **Date of issue: August 9th, 2010**		
Comment	The test result only responds to the measured sample.		

Approved by Yang Weizhong **Revised by** Fan Guangchang **Performed by** Liu Wei

TABLE OF CONTENT

1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report can not be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

1.2. Testing laboratory

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
Post code:	201201
Country:	P. R. China
Contact:	Yang Weizhong
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	http://www.ta-shanghai.com
E-mail:	yangweizhong@ta-shanghai.com

1.3. Applicant Information

Company:	modu LTD.
Address:	Atir-Yeda 17
City:	Kefar-Saba
Postal Code:	44643
Country:	Israel
Contact:	Guy Badichi
Telephone:	972-54-9222168
Fax:	972-9-8648383

1.4. Manufacturer Information

Company:	YuHua TelTech(Shanghai) Co., Ltd.
Address:	4F/2,District B,No.1000 Jinhai Road,Pudong,Shanghai,
City:	Shanghai
Postal Code:	/
Country:	P.R.China
Telephone:	021-51156088-1707
Fax:	021-51156099

1.5. Information of EUT

General information

Name of EUT:	modu W
Device Operating Configurations:	
S/N or IMEI:	A0303001E0000002
Power Supply	Battery or Adapter
Rated Power Supply Voltage:	3.7V
Extreme Voltage:	Minimum: 3.45V Maximum: 4.2V
Extreme Temperature:	Lowest: -20°C Highest: +55°C
Hardware Version:	MUW-T
Software Version:	MUW-V
Used Host Products:	IBM T61

Auxiliary equipment details

AE1: Battery	
Model:	US293350
Manufacturer:	Formosa
S/N:	/
AE2: Earphone(Black)	
Model:	SL-600
Manufacturer:	Fujikon
S/N:	/
AE3: Earphone(White)	
Model:	WS-EC-638
Manufacturer:	WELLSONIC
S/N:	/
AE4: Notebook	
Model:	IBM T61
S/N:	L3-C9644

Equipment Under Test (EUT) is modu W with internal antenna.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. Test Date

The test date is from July 28, 2010 to July 30, 2010.

2. Test Information

2.1. Summary of test results

Number	Test Case	Clause in FCC Rules	Verdict
1	Radiated Emission	15.109, ANSI C63.4-2003	PASS
2	Conducted Emission	15.107, ANSI C63.4-2003	PASS

2.2. Radiated Emission

Ambient condition

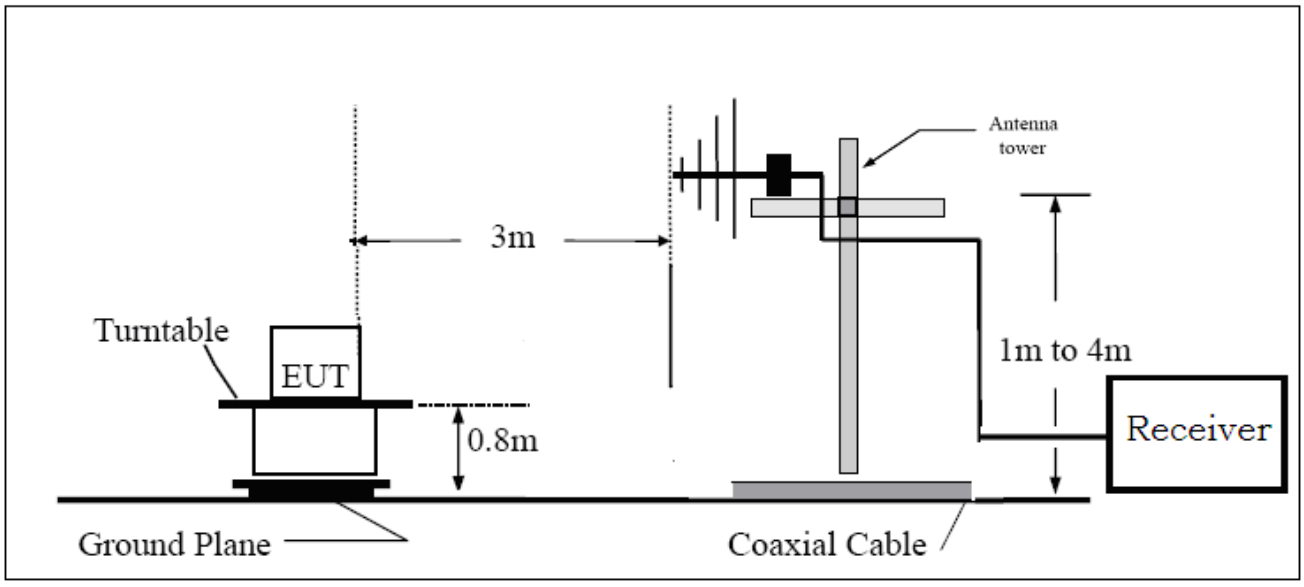
Temperature	Relative humidity	Pressure
24°C~26°C	45%~50%	102.5kPa

Methods of Measurement

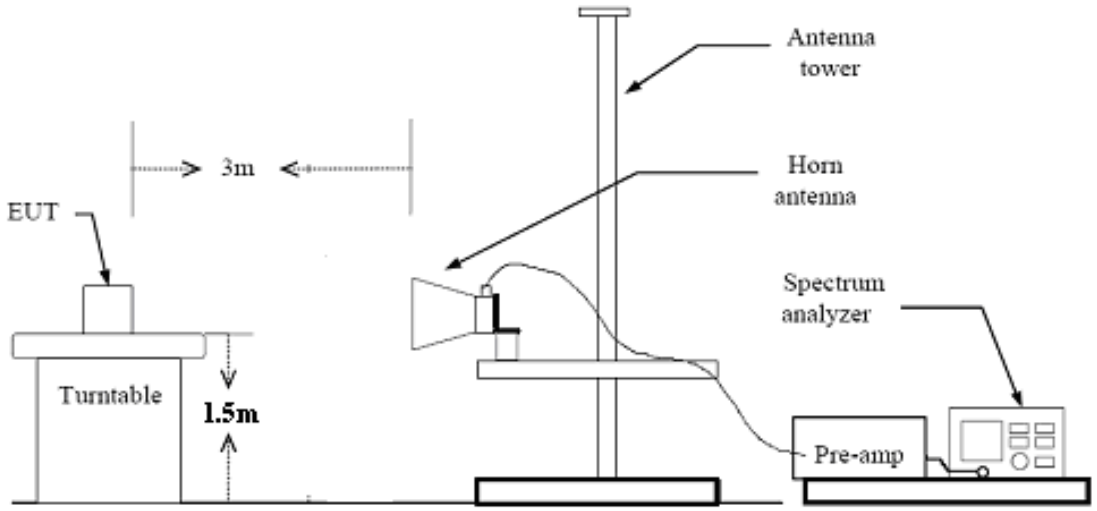
The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The distance between EUT and receive antenna should be 3 meters. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2003. Sweep the whole frequency band through the range from 30MHz to 5GHz. During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna. During the test, EUT is connected to a laptop via a USB cable in the case of USB mode. The EUT is used as the peripheral equipment of the PC. The model of laptop is IBM T61 8892-BAC and the serial number of laptop is L3-C9644. The phone modem drivers were installed on the laptop to be able to communicate with the EUT by continuously sending a querying text file (AT Command) to the phone using Hyper Terminal during the test.
The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing. During the test, the EUT is worked at maximum output power.

Test Setup

Below 1GHz



Above 1GHz



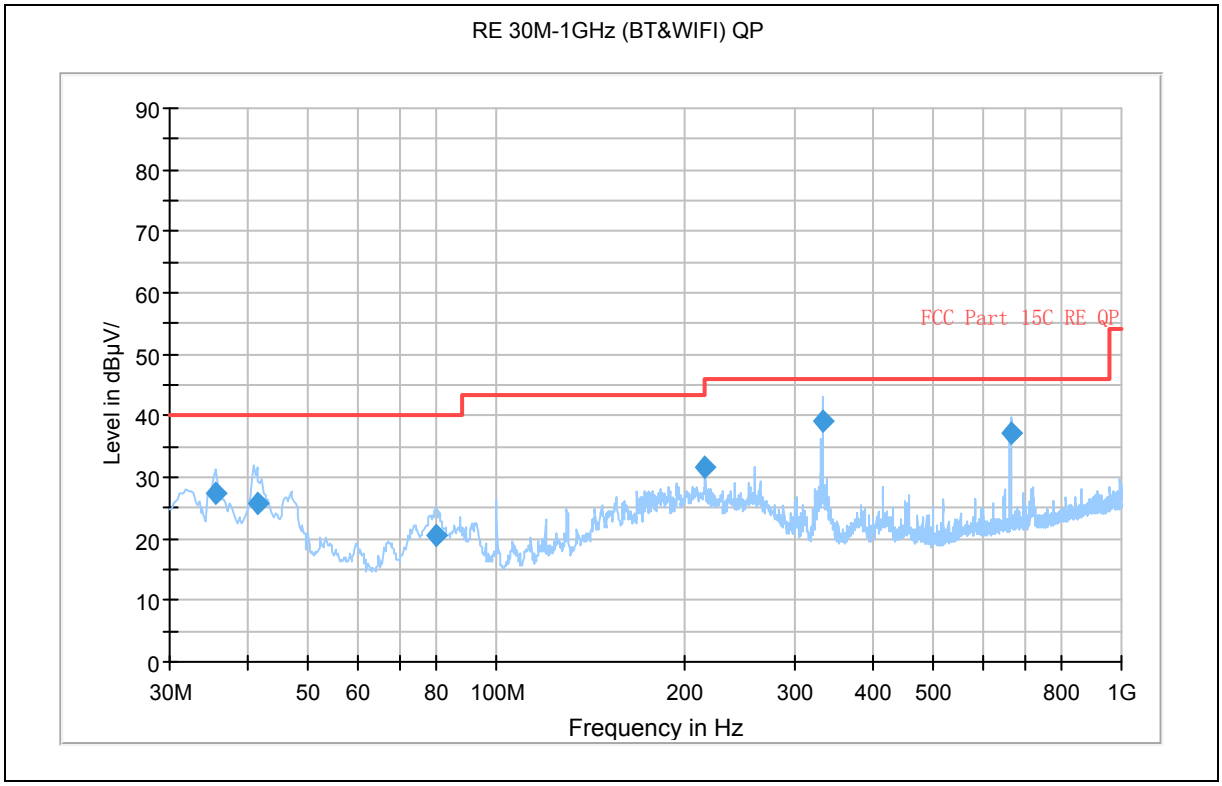
Limits

Frequency (MHz)	Field Strength (dBμV/m)	Detector
30 -88	40.0	Quasi-peak
88-216	43.5	Quasi-peak
216 – 960	46.0	Quasi-peak
960-1000	54.0	Quasi-peak
1000-5th harmonic of the highest frequency or 40GHz,which is lower	54 74	Average Peak

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 3.92 dB.

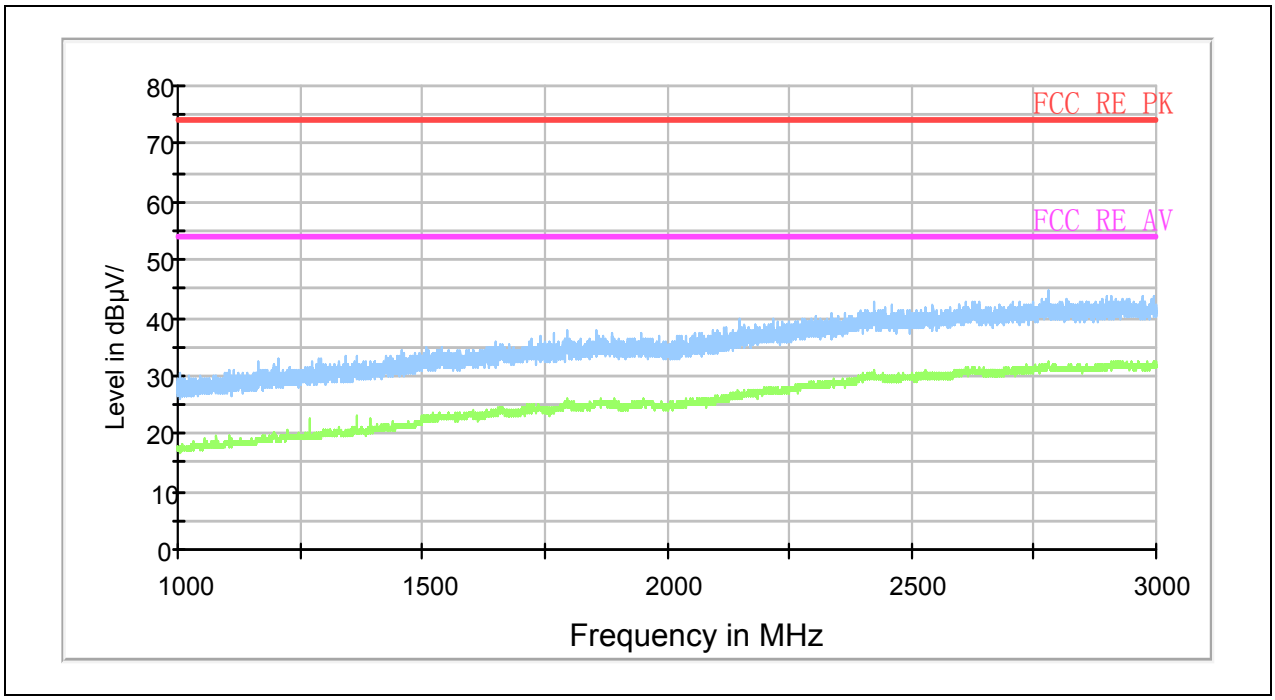
Test Results



Radiated Emission from 30MHz to 1GHz

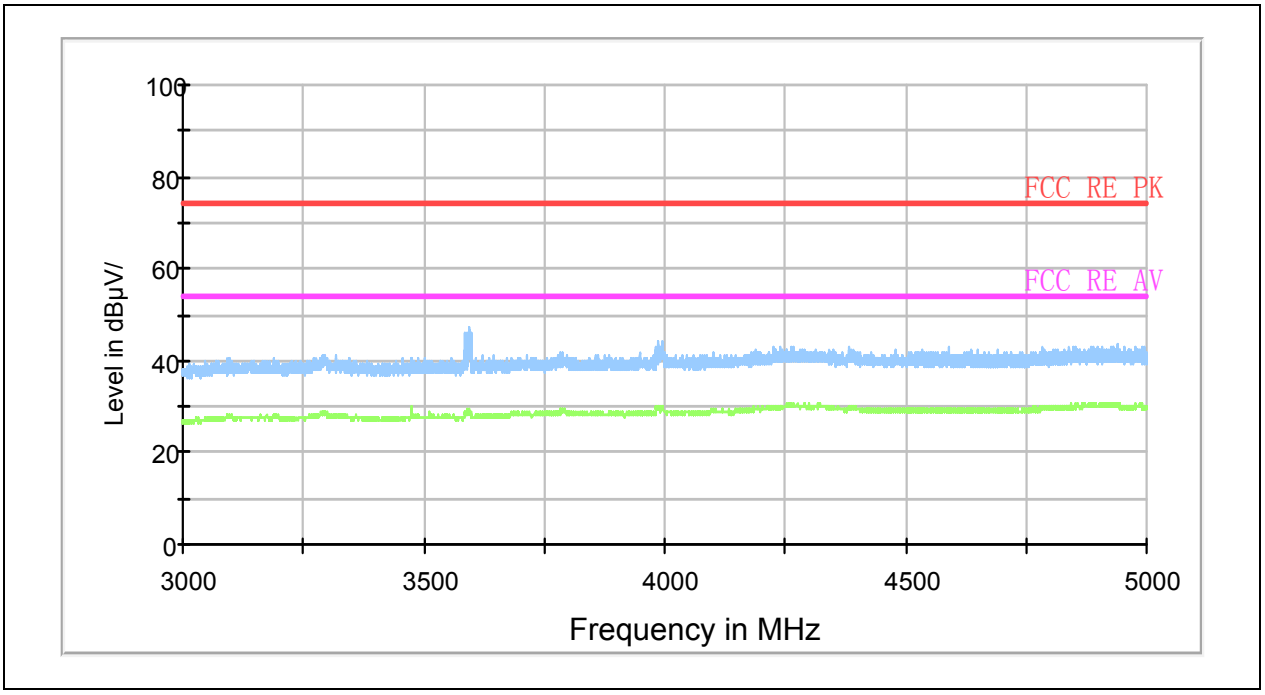
Frequency (MHz)	Quasi-Peak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Margin (dB)	Limit (dBµV/m)
35.617500	27.4	125.0	V	225.0	12.6	40.0
41.432500	25.8	100.0	V	67.0	14.2	40.0
79.995000	20.6	125.0	V	170.0	19.4	40.0
215.997500	31.7	125.0	H	86.0	11.8	43.5
332.157500	39.0	125.0	V	0.0	7.0	46.0
663.895000	37.0	100.0	V	194.0	9.0	46.0

Note: all emissions level measured above 1GHz was more than10dB below the limit



Note: Blue trace uses the peak detection Green trace uses the average detection

Radiated Emission from 1GHz to 3GHz



Note:Blue trace uses the peak detection Green trace uses the average detection

Radiated Emission from 3GHz to 5GHz

2.3. Conducted Emission

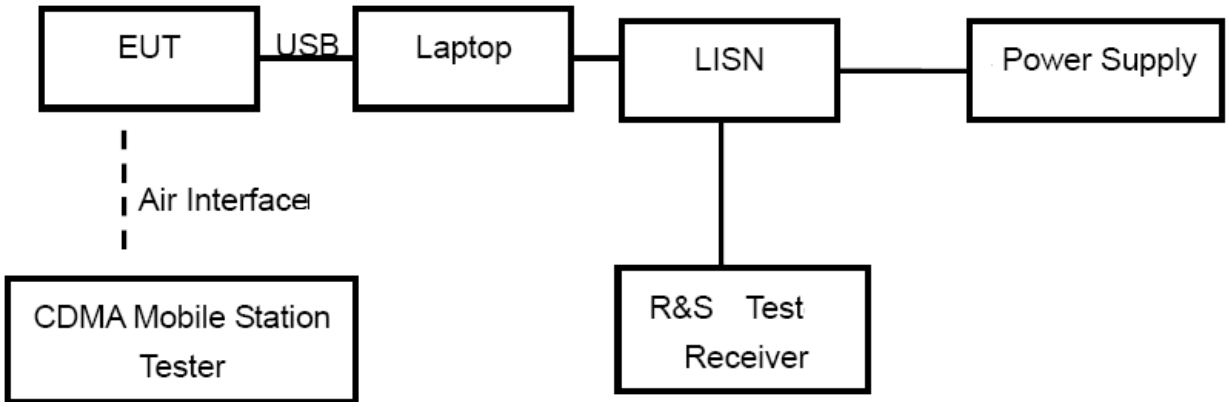
Ambient condition

Temperature	Relative humidity	Pressure
24°C ~26°C	50%~55%	102.5kPa

Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2003. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. The measurement result should include both L line and N line. During the test, EUT is connected to a laptop via a USB cable in the case of USB mode. The EUT is used as the peripheral equipment of the PC. The model of laptop is IBM T61 8892-BAC and the serial number of laptop is L3-C9644. The phone modem drivers were installed on the laptop to be able to communicate with the EUT by continuously sending a querying text file (AT Command) to the phone using Hyper Terminal during the test, and the EUT is worked at maximum output power.

Test Setup



Note: Power Supply is AC Power source and it is used to change the voltage from 220V/50Hz to 110V/60Hz.

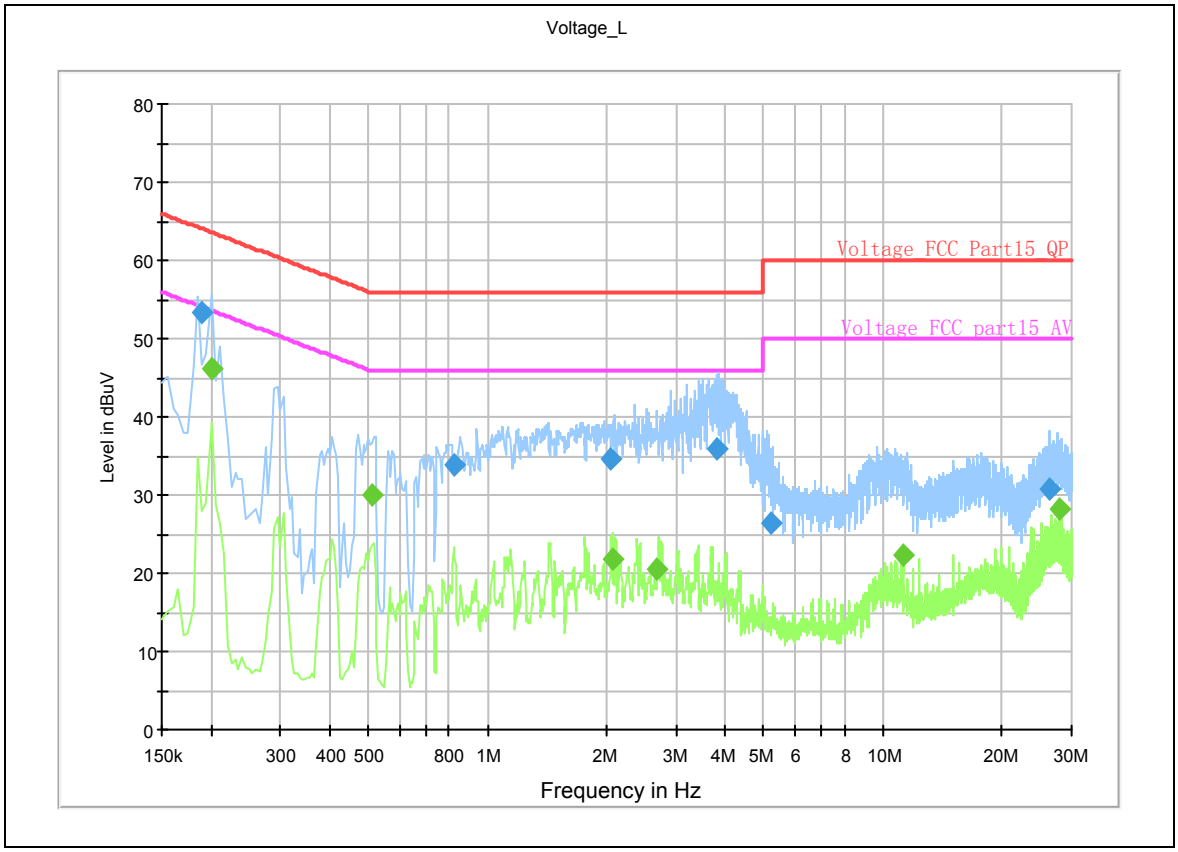
Limits

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U= 2.69 dB.

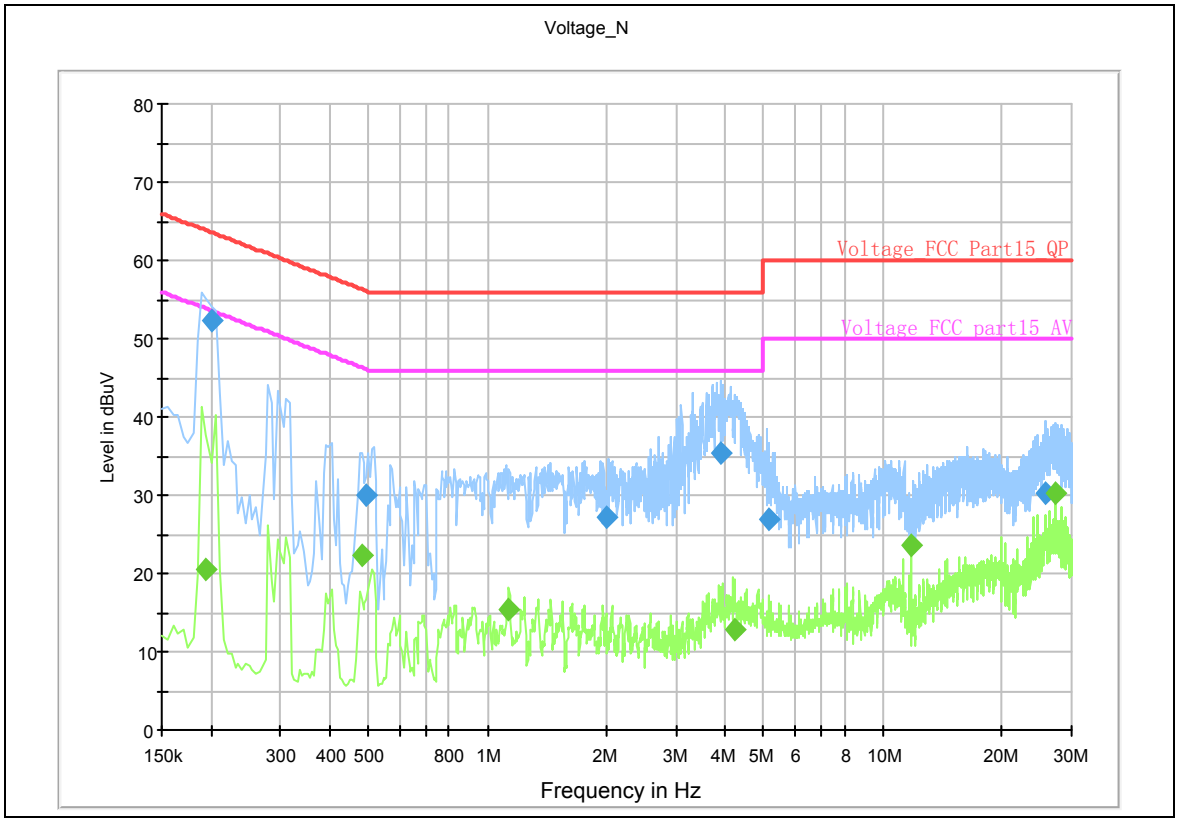
Test Results



Note:Blue trace uses the peak detection Green trace uses the average detection

L line

Conducted Emission from 150 KHz to 30 MHz



Note:Blue trace uses the peak detection Green trace uses the average detection
N line
Conducted Emission from 150 KHz to 30 MHz

Frequency (MHz)	Detector	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)
0.195	Average	N	20.6	53.8	33.2
1.13	Average	N	15.3	46	30.7
2.07	Average	L	21.8	46	24.2
2.675	Average	L	20.4	46	25.6
4.205	Average	N	12.8	46	33.2
11.275	Average	L	22.4	50	27.6
0.495	Quasi-peak	N	30	56.1	26.1
2.01	Quasi-peak	N	27.3	56	28.7
5.165	Quasi-peak	N	27	60	33
5.195	Quasi-peak	L	26.5	60	33.5
25.77	Quasi-peak	N	30.3	60	29.7
26.31	Quasi-peak	L	30.7	60	29.3

3. Main Test Instruments

No.	Name	Type	Manufacturer	Serial Number	Calibration Date	Valid Period
01	Signal Analyzer	FSV	R&S	100815	2010-06-28	One year
02	Signal generator	SMR27	R&S	100365	2010-07-01	One year
03	EMI Test Receiver	ESCI	R&S	100948	2010-07-01	One year
04	Trilog Antenna	VULB 9163	SCHWARZBECK	9163-201	2010-06-29	Two years
05	Horn Antenna	HF907	R&S	100126	2009-07-02	Two years
06	LISN	3816/2	EMCO	00084033	2009-12-04	Two years
07	AC Power Source	AFC-11005G	APC	F309040118	2009-08-03	Three years
08	Semi-Anechoic Chamber	9.6*6.7*6.6m	ETS-Lindgren	NA	NA	NA
09	EMI test software	ES-K1	R&S	NA	NA	NA

*******END OF REPORT BODY*******