

**ETS Dr.GenZ Taiwan PS Co., LTD.**

**FCC Registration No.: 930600**

**Industry Canada Reg. No. IC 5679**

**Accredited Testing Laboratory**



**A2LA Cert.No.: 2300.01**

**PTCRB Accredited Type Certification Test House**

# **TEST - REPORT**

**FCC RULES PART 15 / SUBPART B**

**FCC ID: P5A-AB0003**

**Test report no.: W6M20607-7237-P-15B**

# **FCC**

ETS DR.GENZ TAIWAN PS CO., LTD  
6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU, TAIPEI 114, TAIWAN, R.O.C.  
PHONE 886-2-66068877 FAX 886-2-66068879

## TABLE OF CONTENTS

<b>1</b>	<b>General Information</b>	<b>2</b>
1.1	Notes	2
1.2	Tester	4
1.3	Testing laboratory	5
1.3.1	Location	5
1.3.2	Details of accreditation status	5
1.3.3	Test location, where different from ETS Dr.Genz Taiwan PS Co., Ltd.	5
1.4	Details of applicant	6
1.5	Application details	6
1.6	Test item	6
1.6.1	Description of test item	6
1.6.2	Manufacturer (if different from applicant in point 1.4)	7
1.6.3	Frequency behavior	7
1.7	Test standards	7
<b>2</b>	<b>Technical test</b>	<b>8</b>
2.1	Summary of test results	8
2.2	Test environment	8
2.3	Test equipment utilized	9
2.4	Test results	11
2.4.1	Conducted Emission	12
2.4.2	Radiated Emission	13
2.5	Test protocols	14
2.5.1	Radiated Emission	14
2.5.2	Conducted Emission	16
2.6	Equipment Modification	20
<b>3</b>	<b>Normative references</b>	<b>21</b>

### Annex : Pictures and diagrams

# 1 General Information

## 1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The tests were carried out and passed in accordance to the standards:

**FCC part 15 : September 2005**

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has Passed all the relevant tests conforms to a specification (only telecommunication products).

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.6.

The test report may only be reproduced or published in full.

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Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

**Important Notes:**

Proper labeling is required for each device. Devices shall be labeled in accordance with labeling requirements pursuant to section 15.19 and section 2.1074 of the FCC rules.

Devices subject to a Declaration of Conformity shall be uniquely identified by the responsible party.

This identification shall not be of a format which could be confused with the FCC Identifier required on certified, notified type accepted or type approved equipment.

The responsible party shall maintain adequate identification records to facilitate positive identification for each device.

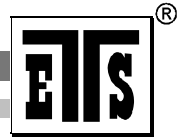
The user manual or instruction manual shall include also a warning statement that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Reference Section 15.21

Furthermore an information to the user regarding to the interference potential of the device and about simple measures that can be taken to correct interference is required.

Reference Section 15.105

The responsible party must warrant that each unit of equipment marketed under a Declaration of Conformity is identical to the unit tested and found acceptable with the standards and that the records maintained by the responsible party continue to reflect the equipment being produced under the Declaration of Conformity within the variation that can be expected due to quantity production and testing on a statistical basis.



Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

**1.2 Tester**

Aug. 09, 2006

Jay Chaing

*Jay Chaing*

Date

ETS-Lab.

Test Engineer

Signature

Technical responsibility for area of testing:

Aug. 09, 2006

Steven Chuang

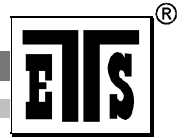
*Steven Chuang*

Date

ETS

Name

Signature



Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

### 1.3 Testing laboratory

#### 1.3.1 Location

OATS

No.5-1, Shuang Sing Village,  
LiShuei Rd., Wanli Township,  
Taipei County 207, Taiwan (R.O.C.)

Company

ETS Dr.Genz Taiwan PS Co., Ltd.  
6F, NO. 58, LANE 188, RUEY-KUANG RD.  
NEIHU, TAIPEI 114, TAIWAN R.O.C.  
Tel : 886-2-66068877  
Fax : 886-2-66068875

#### 1.3.2 Details of accreditation status

Accredited testing laboratory

A2LA-registration number: 2300.01

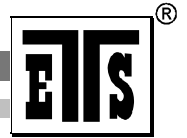
FCC filed test laboratory Reg. No. 930600

Industry Canada filed test laboratory Reg. No. IC 5679

PTCRB Accredited Type Certification Test House

#### 1.3.3 Test location, where different from ETS Dr.Genz Taiwan PS Co., Ltd.

Name:	./.
Street:	./.
Town:	./.
Country:	./.
Telephone:	./.
Fax:	./.
Teletex:	./.



Registration number: W6M20607-7237-P-15B

FCC ID: P5A-AB0003

## 1.4 Details of applicant

Name : ARESON Technology Corp. (Taiwan)  
Street : 12F, No.111-6, Hsing-De Rd, San Chung  
Town : Taipei Hsien  
Country : Taiwan, R.O.C.  
Telephone : +886-2-2995-4995  
Fax : +886-2-2995-4990

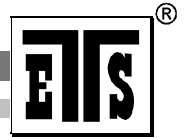
## 1.5 Application details

Date of receipt of application : July 31, 2006  
Date of receipt of test item : Aug. 03, 2006  
Date of test : From Aug. 04, 2006 to Aug. 07, 2006

## 1.6 Test item

### 1.6.1 Description of test item

Type of product : Optical Mouse  
Type identification : B136,Optical Mouse  
Serial No. : B136 USB, B136 PS/2, B136 USB&PS/2  
Brand Name : ./.  
Photos : Please find in Appendix.



Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

**1.6.2 Manufacturer (if different from applicant in point 1.4)**

Name : Dong Guan Hong Sheng Electronic Corp.(China)  
Street : Sha-Wu,Tang-Xia,Dong-Guan  
Town : Guan-Dong  
Country : China

**1.6.3 Frequency behavior**

Highest clock Frequency	<200 MHz
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**1.7 Test standards**

**FCC part 15 : September 2005**



Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

## 2 Technical test

### 2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

**Or**

The deviations as specified in 2.4 were ascertained in the course of the tests performed.

### 2.2 Test environment

Temperature:	18 ... 25 °C
Relative humidity content	20 ... 75 %
Air pressure:	860 ... 1030 hPa
Details of power supply:	5 VDC (Power on PC)
Other parameters:	without

Registration number: W6M20607-7237-P-15B

FCC ID: P5A-AB0003

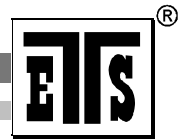
## 2.3 Test equipment utilized

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2005/10/27	2006/10/26
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2005/10/25	2006/10/24
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2005/10/21	2006/10/20
ETSTW-CE 006	IMPULS-BEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2004/11/11	2006/11/10
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	ABSORPTIONS- MESSWANDLER- ZANGE	2005/10/24	2007/10/23
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2005/8/18	2006/8/17
ETSTW-CE 011	Power Line Conducted Emission Only	None	None	ETS	2005/10/25	2006/10/24
ETSTW-CE 012	Dual-Phase-V-Network	NNB-2/16Z	03/10201	Telemeter	2006/6/13	2007/6/12
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	2005/10/14	2007/10/13
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2005/10/24	2006/10/23
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2005/10/29	2006/10/30
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2005/10/16	2006/10/15
ETSTW-RE 010	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070181	MOTECH	Function Test	
ETSTW-RE 011	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070165	MOTECH	Function Test	
ETSTW-RE 017	ANTENNA	HL025	352886/001	R&S	2006/5/4	2008/5/3
ETSTW-RE 018	ANTENNA	AT4560	27212	AR	2004/11/8	2007/11/7
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2005/10/14	2006/10/13
ETSTW-RE 022	AMPLIFIER	8447D	2944A09837	Agilent	2005/10/14	2006/10/13
ETSTW-RE 027	Passive Loop Antenna	6512	34563	EMCO	2004/6/30	2007/6/29
ETSTW-RE 028	Log-Periodic DipoleArray Antenna	3148	34429	EMCO	2006/5/26	2008/5/25
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2006/5/26	2008/5/25
ETSTW-RE 030	Double-Ridged Waveguide Horn Antenna	3117	35224	EMCO	2006/5/3	2008/5/2
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2005/10/17	2006/10/16
ETSTW-RE 033	4CH 1GHz 5GS/s DSO	WAVERUNNER 6100A	LCRY0604P14508	LeCory	2005/8/11	2006/8/10
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2005/10/17	2006/10/16
ETSTW-RE 037	Log-Periodic DipoleArray Antenna	3148	00034546	EMCO	2004/11/18	2006/11/17
ETSTW-RE 038	Log-Periodic DipoleArray Antenna	3148	00034547	EMCO	2004/11/18	2006/11/17
ETSTW-RE 039	Biconical Antenna	3110B	41760	EMCO	2004/11/18	2006/11/17
ETSTW-RE 040	Biconical Antenna	3110B	41761	EMCO	2004/11/18	2006/11/17
ETSTW-RE 042	ANTENNA	HK116	100172	R&S	2005/1/14	2007/1/13
ETSTW-RE 043	ANTENNA	HL223	100166	R&S	2006/5/8	2008/5/7

Registration number: W6M20607-7237-P-15B

FCC ID: P5A-AB0003

ETSTW-RE 044	ANTENNA	HL050	100094	R&S	2006/5/29	2008/5/28
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2005/3/22	2008/3/21
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2005/5/19	2007/5/18
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26	200074	R&S	2005/9/6	2006/9/5
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	93	EMC-PARTNER	2005/9/12	2006/9/11
ETSTW-EMS 002	Frequency Converter	YF-6020	0308014	T-Power	Function Test	
ETSTW-GSM 01	SIM Simulator	IT3	B2004-50106	ORGA	2005/9/15	2006/9/14
ETSTW-GSM 02	Universal Radio Communication Tester	CMU 200	103489	R&S	2005/11/15	2006/11/14
ETSTW-GSM 03	Agilent 8960 Test Set 1	E5515C	GB44052675	Agilent	2006/7/13	2008/7/12
ETSTW-GSM 04	Agilent 8960 Test Set 2	E5515C	GB44052665	Agilent	2006/7/13	2008/7/12
ETSTW-GSM 05	Agilent 8960 Test Set 3	E5515C	GB44052652	Agilent	2006/7/16	2008/7/15
ETSTW-GSM 06	Agilent 8960 Test Set 4	E5515C	GB44052684	Agilent	2006/7/16	2008/7/15
ETSTW-GSM 07	Agilent 8960 Test Set 5	E5515C	GB44052658	Agilent	2006/7/13	2008/7/12
ETSTW-GSM 08	Agilent 8960 Test Set 6	E5515C	GB44052666	Agilent	2006/7/16	2008/7/15
ETSTW-GSM 10	Combiner Wessex / Anite	B4605/100	053	Wessex / Anite	2006/7/13	2008/7/12
ETSTW-GSM 11	GSM 850,900,1800,1900 Test system	TS8950G		R&S	2005/11/1	2006/10/31
ETSTW-GSM 12	Acoustical Calibrator	4231	2463874	Brüel&Kjær	2005/10/31	2006/10/30
ETSTW-GSM 16	TEMP.&HUMIDITY CHAMBER	GTH-120-40-1P-U	MAA0501002	GIANT FORCE	2005/12/29	2006/12/28
ETSTW-GSM 18	AUDIO ANALYZER	UPL16	100173	R&S	2005/10/29	2006/10/28
ETSTW-GSM 24	Vibration Testing System	VS-100V	5494	Vibration	2005/12/20	2006/12/19



Registration number: W6M20607-7237-P-15B  
 FCC ID: P5A-AB0003

## 2.4 Test results

1<sup>st</sup> test     
  test after modification     
  production test

Test			Done	Test passed	Test failed
Emission / Immunity					
Emission	Conducted Emission	FCC part 15.107	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emission	Radiated Emission	FCC part 15.109	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## 2.4.1 Conducted Emission

### 2.4.1.1 Test Equipment

a) Artificial mains (ESH3-Z5)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-CE 004

b) Artificial mains (ESH3-Z2)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-CE 006

c) Test receiver (ESHS10)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-CE 001

d) Shielded room

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 023

e) AC Power Source (APS-9102)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-CE 003

f) Universal Radio Communication Tester (CMU200)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-GSM

- Test configuration

The test configuration is contained inside of a shielded chamber and corresponds to the standard CISPR 22 . The equipment under test is placed in the facility on a wooden table 0.8m high. The equipment under test is connected with the artificial mains network (AMN) in a distance of 0,8m and also 0,8m from other subassembly and metallic area. The measurement receiver are placed in a special room adjacent to the chamber. The observation of the equipment under test is realized by 3 video cameras and by a microphone.

- Test parameters and marginal conditions

The test are carried out with a nominal impedance by  $50\Omega / 50\mu\text{H}$  of the AMN in a frequency range 150 kHz to 30 MHz. This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector,  
Further information please find in test report.

## 2.4.2 Radiated Emission

### 2.4.2.1 Test Equipment

a) Antenna (HK116)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 015

b) Antenna (HL223)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 016

c) Antenna (HL025)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 017

d) Generator SMX (R&S)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-CS 001

e) Semi Anechoic (OATS 10m)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 026

f) ESI-26

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 003

g) Anechoic Chamber

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 025

### 2.4.2.2 Test Procedures

- Test configuration

The test configuration corresponds to FCC part 15 subpart B. The equipment under test is placed on a non metallic table with 0,8m height. The power supply and the RF connection points are close to the equipment under test at the floor inside a connection box. The cables to this connection box are shielded and below the double floor. The receiving antenna is placed in a height at 1,0 to 4,0m, in a distance of 3m. The measurement receiver are placed in a special room. The observation of the equipment under test is realized by 3 video cameras and by a microphone.

- Test parameters and marginal conditions

The test are carried out with horizontal and vertical polarization of the antenna in a frequency range of 30 MHz to 5000 MHz . Further information please find in the test protocol.

Registration number: W6M20607-7237-P-15B

FCC ID: P5A-AB0003

## 2.5 Test protocols

### 2.5.1 Radiated Emission

## Radio Noise Field Strength

# Emission

Standard : FCC part 15B

Device : B136, Optical Mouse

Date : Aug. 09, 2006

Class : B

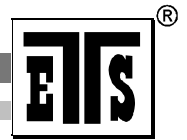
Temperature : 23.9 °C

Pressure : 939 hPa

Rel. humidity: 49 %

Frequency Range Polarization	Limit μV/m	Passed	Failed	Number of rechecks
30 MHz – 88 MHz	100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0
88 MHz – 216 MHz	150	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0
216 MHz – 960 MHz	200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0
960 MHz – 1000 MHz	500	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0

Comment: See attached diagrams as appendix A



Registration number: W6M20607-7237-P-15B  
 FCC ID: P5A-AB0003

Standard : FCC part 15B  
Device : B136,Optical Mouse  
Date : Aug. 09, 2006  
Class : B

Temperature : 23.9 °C  
 Pressure : 939 hPa  
 Rel. humidity: 49 %

**Summary table with radiated data of the test plots**

**USB Mode**

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)		Correction Factor (dB)	Test Result (dBuV/m)		Compliance Limit (dBuV/m)	Margin (dB)		Table Azimuth (degree)	Antenna Height (cm)
		QP	AV		QP	AV		QP	AV		
H	170.980	--	13.27	14.19	--	27.46	30.0	--	2.54	88	302
	106.312	14.41	--	11.48	25.89	--	30.0	--	4.11	131	341
	233.667	15.87	--	12.76	28.63	--	37.0	--	8.37	180	337
	943.887	5.11	--	27.69	32.80	--	37.0	--	4.20	254	121

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)		Correction Factor (dB)	Test Result (dBuV/m)		Compliance Limit (dBuV/m)	Margin (dB)		Table Azimuth (degree)	Antenna Height (cm)
		QP	AV		QP	AV		QP	AV		
V	170.945	--	13.56	14.18	--	27.74	30.0	--	2.26	90	114
	163.932	--	10.05	14.51	--	24.56	30.0	--	5.44	112	142
	233.668	12.83	--	12.77	25.60	--	37.0	--	11.40	345	137
	879.795	7.93	--	23.86	31.79	--	37.0	--	5.21	302	316



**PS2 Mode**

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)		Correction Factor (dB)	Test Result (dBuV/m)		Compliance Limit (dBuV/m)	Margin (dB)		Table Azimuth (degree)	Antenna Height (cm)
		QP	AV		QP	AV		QP	AV		
H	200.000	--	15.56	11.56	--	27.12	30.0	--	2.88	121	305
	499.799	11.59	--	20.07	31.66	--	37.0	--	5.34	251	141
	38.857	--	15.48	12.76	--	28.24	30.0	--	1.76	348	347
	113.126	13.08	--	11.92	25.00	--	30.0	--	5.00	331	305

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuv)		Correction Factor (dB)	Test Result (dBuV/m)		Compliance Limit (dBuV/m)	Margin (dB)		Table Azimuth (degree)	Antenna Height (cm)
		QP	AV		QP	AV		QP	AV		
V	260.921	12.69	--	13.85	26.54	--	37.0	--	10.46	151	136
	943.887	3.27	--	27.75	31.02	--	37.0	--	5.98	94	321
	28.571	14.63	--	12.74	27.37	--	30.0	--	2.63	245	125
	103.246	16.75	--	10.87	27.62	--	30.0	--	2.38	312	117

- Note**
- 1. Correction Factor = Antenna factor + Cable loss - Preamplifier**
  - 2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor**
  - 3. Detector function in the form : P = Peak, QP = Quasi Peak, AV = Average**

Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

## 2.5.2 Conducted Emission

### Conducted Emission

# Emission

Standard : FCC part 15B

Device : B136, Optical Mouse

Date : Aug. 09, 2006

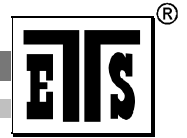
Class : B

Temperature : 23.9 °C  
Pressure : 939 hPa  
Rel. humidity: 49 %

Frequency Range	Limit Db $\mu$ V		Passed	Failed	Number of rechecks
	Quasi- peak	Average			
150 kHz – 500 kHz AC	66 to 56*	56 to 46*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0
500 kHz – 5 MHz AC	56	46	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0
5 MHz – 30 MHz AC	60	50	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0

\*Decreases with logarithm of the frequency

Comment: See attached diagrams as appendix B



Registration number: W6M20607-7237-P-15B  
 FCC ID: P5A-AB0003

Standard : EN 55022

Device : B136,Optical Mouse

Date : Aug. 09, 2006

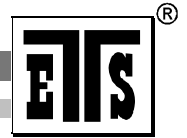
Class : B

Temperature : 23.9 °C  
 Pressure : 921 hPa  
 Rel. humidity: 49 %

**USB Mode**

LISN type	Frequency Marker	Corrected Reading (dBuV)		Correction Factor	Test Result (dBuV)		Compliance Limit (dBuV)		Margin (dB)	
		QP	AV		dB	QP	AV	QP	AV	QP
N	MHz	QP	AV	dB	QP	AV	QP	AV	QP	AV
	25.418	42.02	32.90	10.10	52.12	43.00	60.0	50.0	7.88	7.00
	0.151	48.08	20.79	10.10	58.18	30.89	66.0	50.0	7.82	19.11
	0.570	32.64	19.80	10.10	42.74	29.90	56.0	46.0	13.26	16.10

LISN type	Frequency Marker	Corrected Reading (dBuV)		Correction Factor	Test Result (dBuV)		Compliance Limit (dBuV)		Margin (dB)	
		QP	AV		dB	QP	AV	QP	AV	QP
L1	MHz	QP	AV	dB	QP	AV	QP	AV	QP	AV
	25.760	44.20	33.71	10.10	54.30	43.81	60.0	50.0	5.70	6.19
	0.653	35.76	25.02	10.10	45.86	35.12	56.0	46.0	10.14	10.88
	0.152	48.02	22.03	10.10	58.12	32.13	66.0	56.0	7.88	23.87



Registration number: W6M20607-7237-P-15B  
 FCC ID: P5A-AB0003

**PS2 Mode**

LISN type	Frequency Marker	Corrected Reading (dBuV)		Correction Factor	Test Result (dBuV)		Compliance Limit (dBuV)		Margin (dB)	
		QP	AV		dB	QP	AV	QP	AV	QP
N	MHz	QP	AV	dB	QP	AV	QP	AV	QP	AV
	0.151	47.74	19.99	10.10	57.84	30.09	66.0	56.0	8.16	25.91
	0.650	32.44	20.34	10.10	42.54	30.44	56.0	46.0	13.46	15.56
	25.630	44.49	25.11	10.10	54.59	35.21	60.0	50.0	5.41	14.79

LISN type	Frequency Marker	Corrected Reading (dBuV)		Correction Factor	Test Result (dBuV)		Compliance Limit (dBuV)		Margin (dB)	
		QP	AV		dB	QP	AV	QP	AV	QP
N	MHz	QP	AV	dB	QP	AV	QP	AV	QP	AV
	0.151	47.34	21.64	10.10	57.44	31.74	66.0	56.0	8.56	24.26
	0.651	35.34	19.31	10.10	45.44	29.41	56.0	46.0	10.56	16.59
	25.991	46.33	28.29	10.10	56.43	38.39	60.0	50.0	3.57	11.61

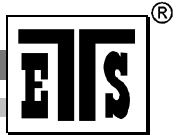
- Note:**
1. The formula of measured value as: **Test Result = Corrected Reading + Correction Factor**
  2. The **Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss**
  3. Detector function in the form : **P = Peak, QP = Quasi Peak, AV = Average**



Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

## 2.6 Equipment Modification

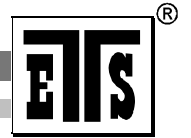
No modification was made to pass all tests.



Registration number: W6M20607-7237-P-15B  
FCC ID: P5A-AB0003

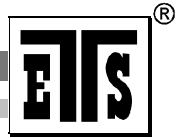
### **3 Normative references**

- /1/ FCC part 15  
Radio Frequency Devices
  
- /2/ CISPR 22  
Limits and Methods of Measurement of Radio Interference Characteristics of Information  
Technology Equipment



## Appendix

- A Radiated Emission
- B Conducted Emission
- C Pictures



## Appendix A

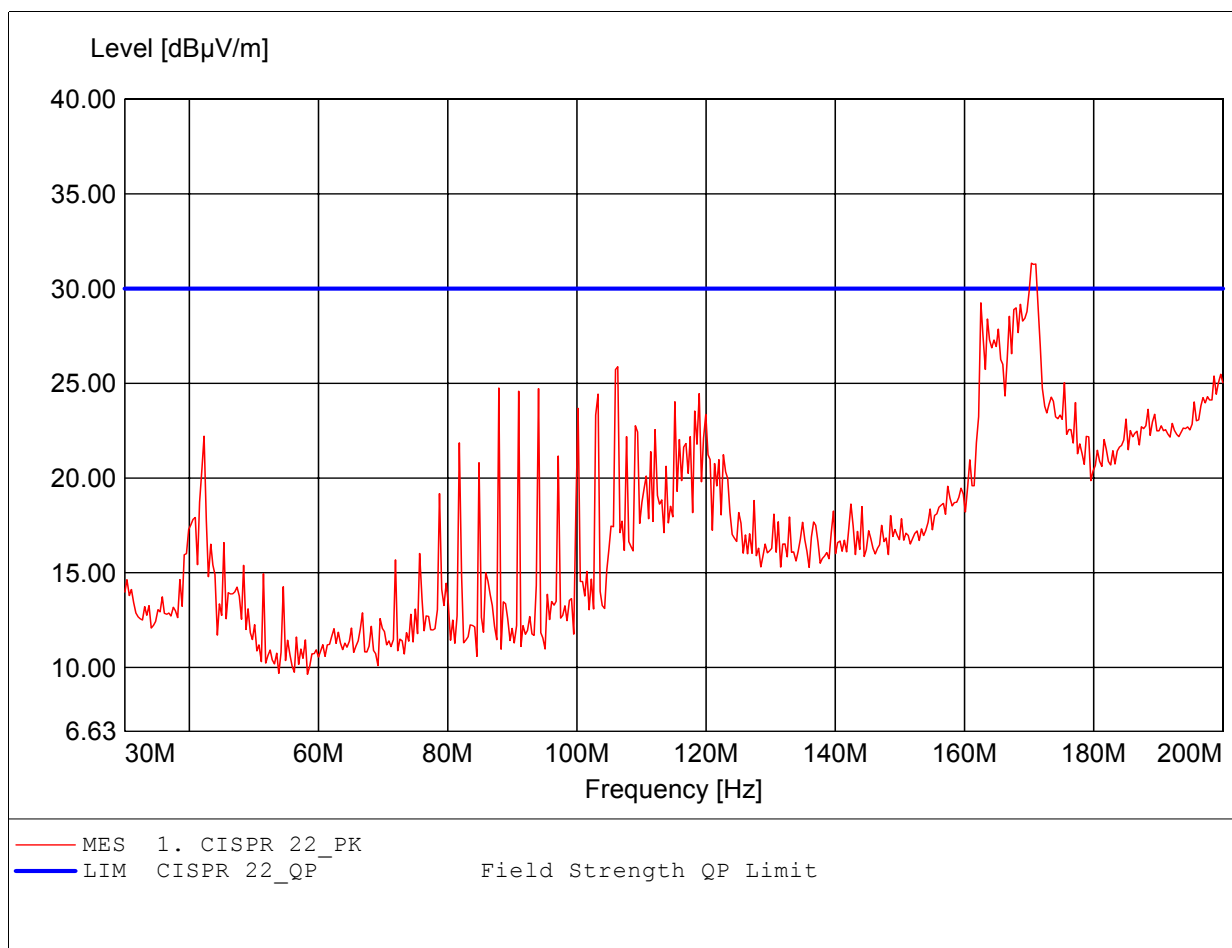
### Radiated Emission

**The measurement diagrams plots attached below are preliminary wideband scan with a peak detector and for reference only. The test results are listed on section on 2.5.1**



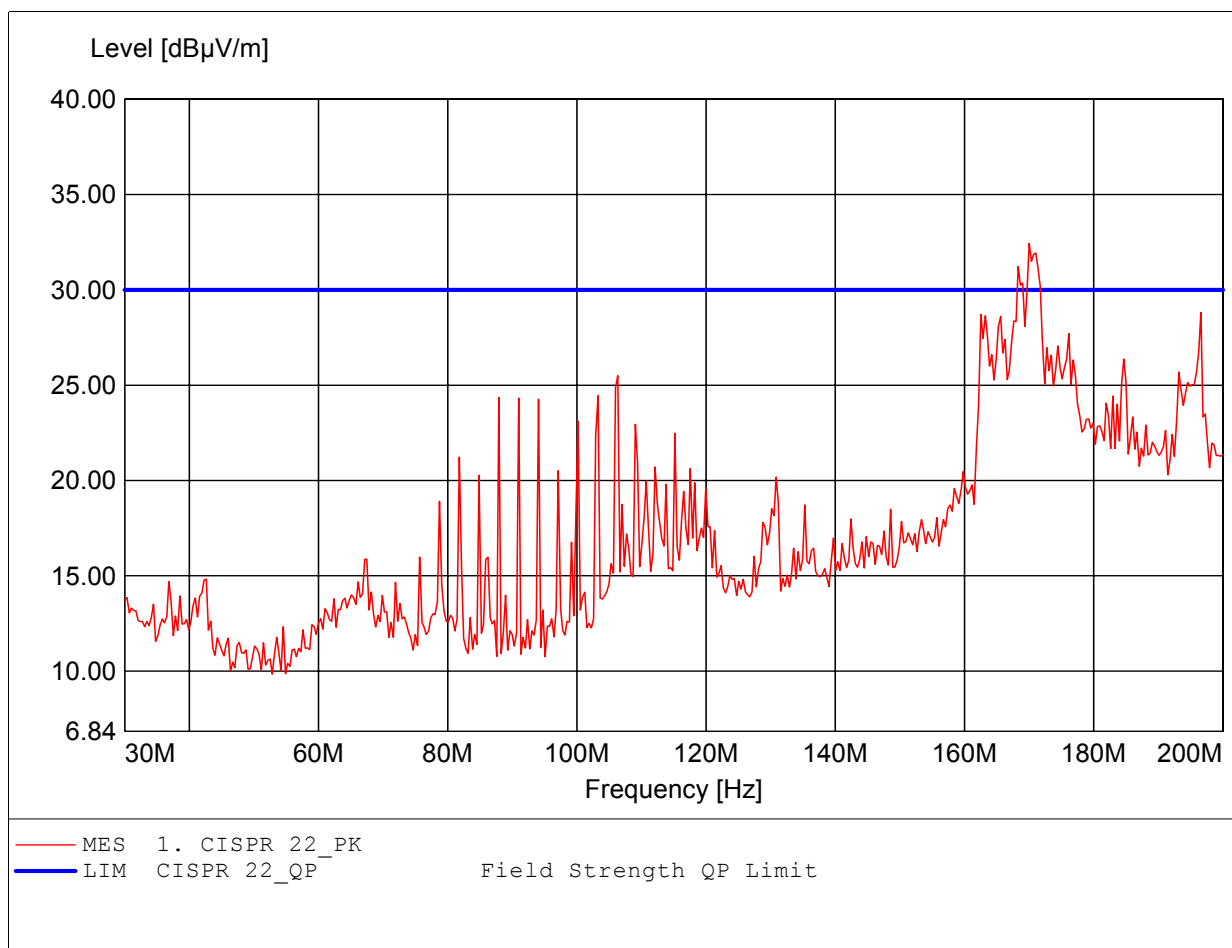
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:USB  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:170.361MHz Emax:31.35dBµV/m RBW: 100 kHz



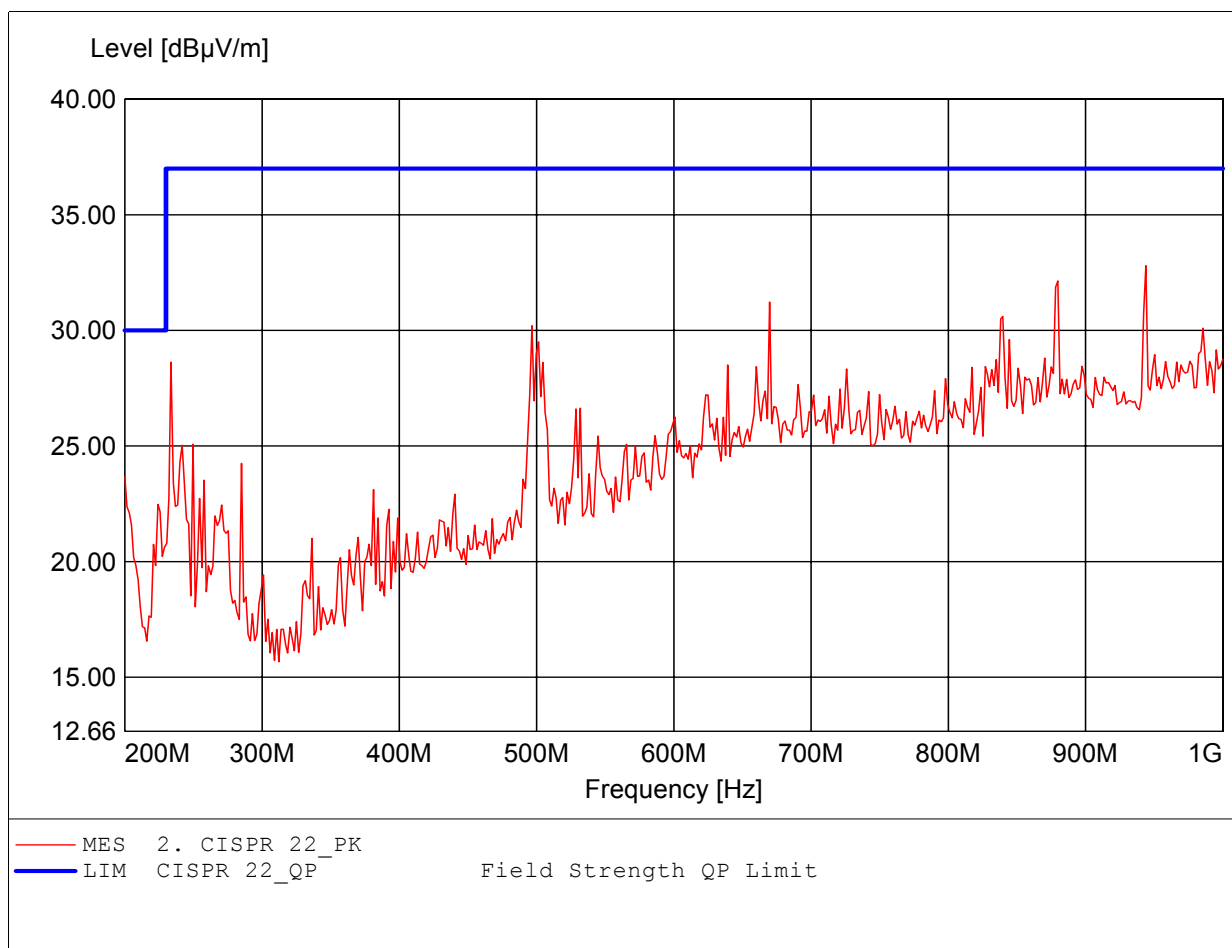
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:USB  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:170.020MHz Emax:32.45dBµV/m RBW: 100 kHz



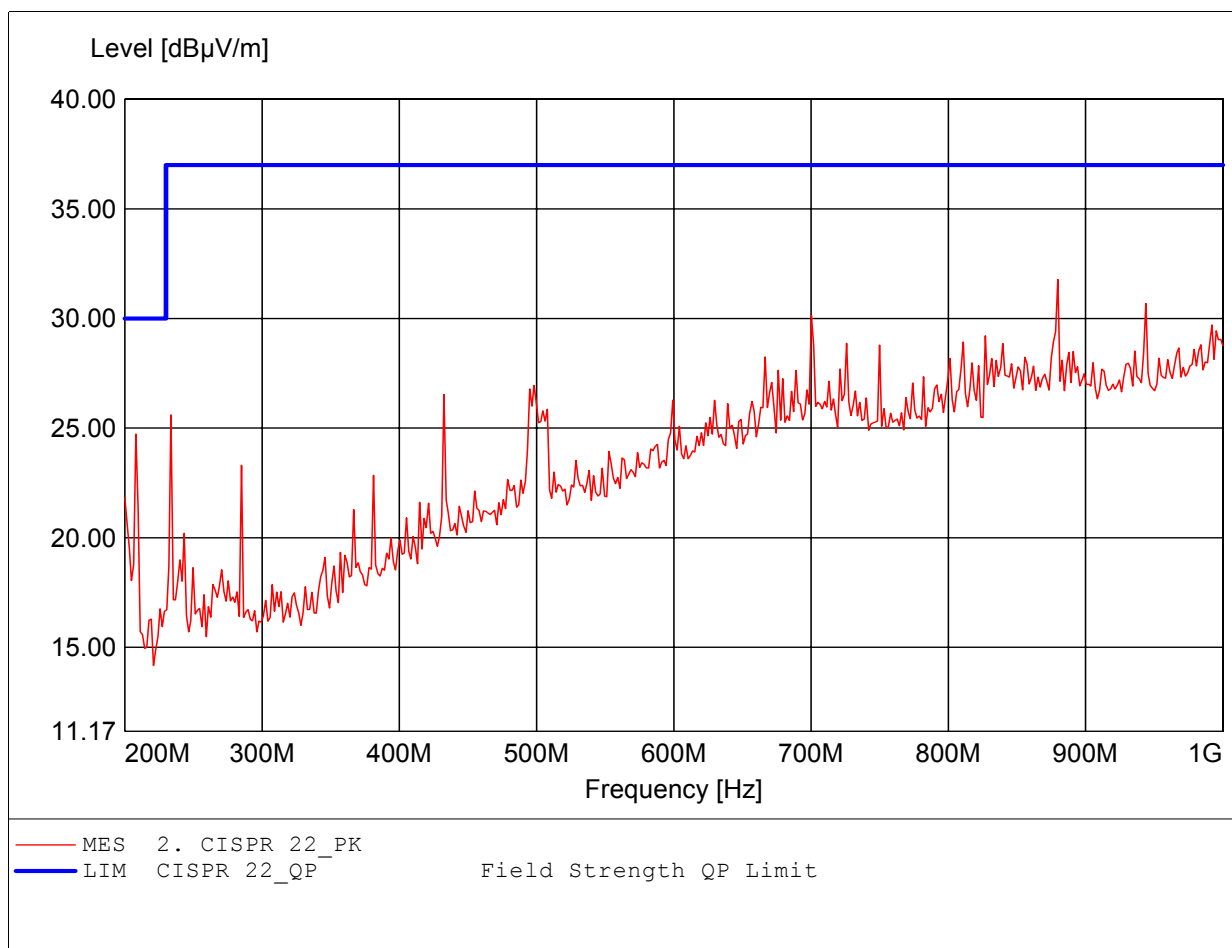
**Spurious emissions under normal conditions**  
**in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:USB  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223  
Freq:943.888MHz Emax:32.80dBµV/m RBW: 100 kHz



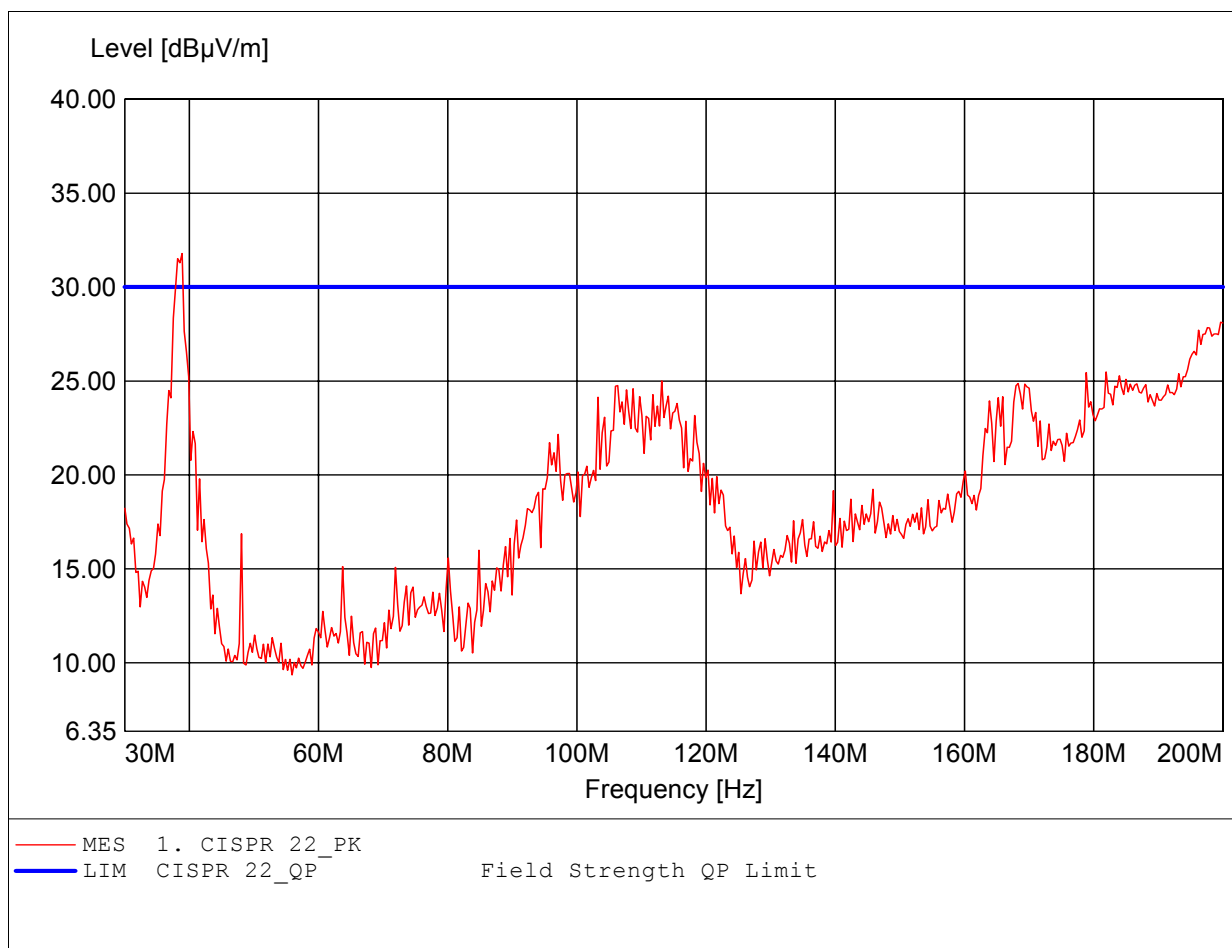
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:USB  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223  
Freq:879.760MHz Emax:31.79dBµV/m RBW: 100 kHz



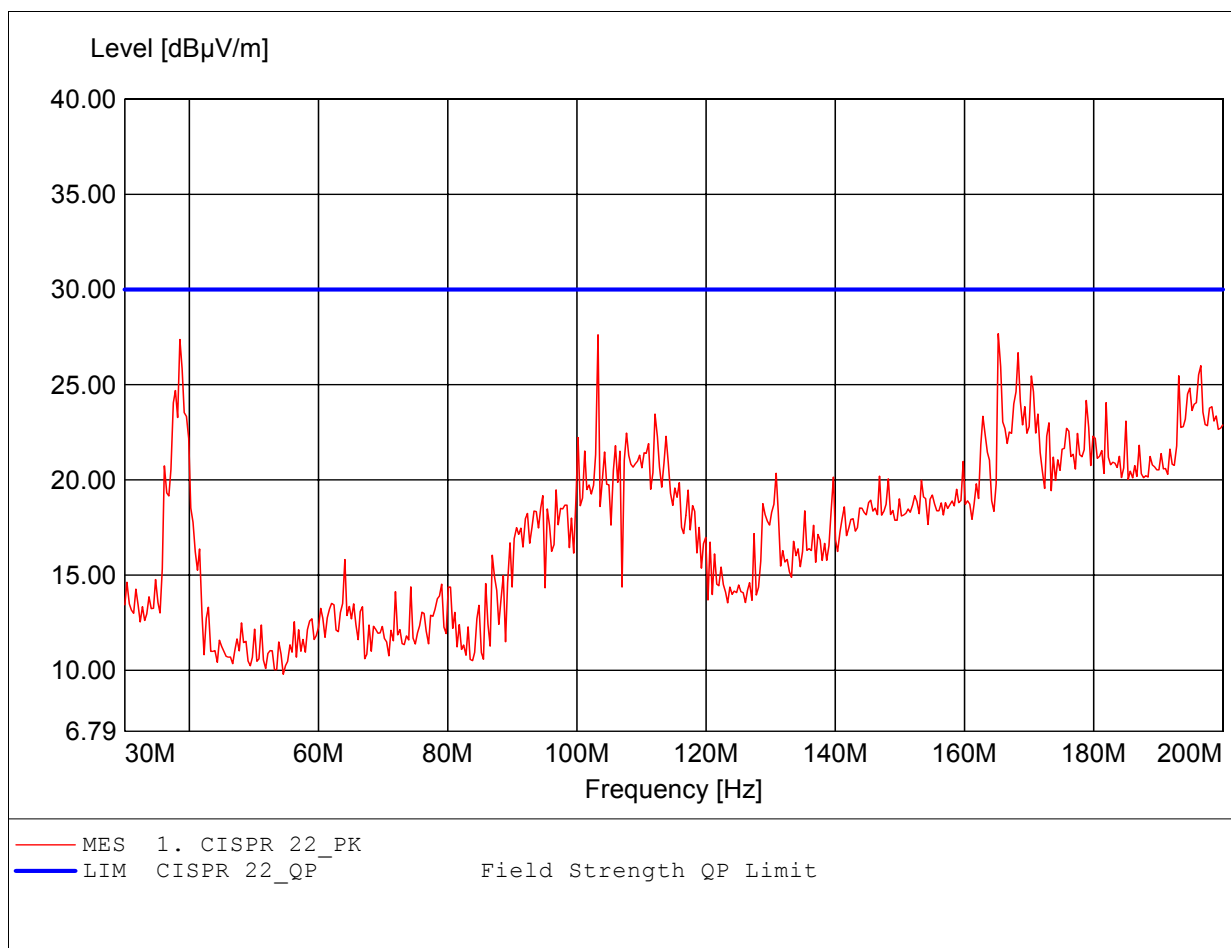
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:PS/2  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:38.858MHz Emax:31.78dBµV/m RBW: 100 kHz



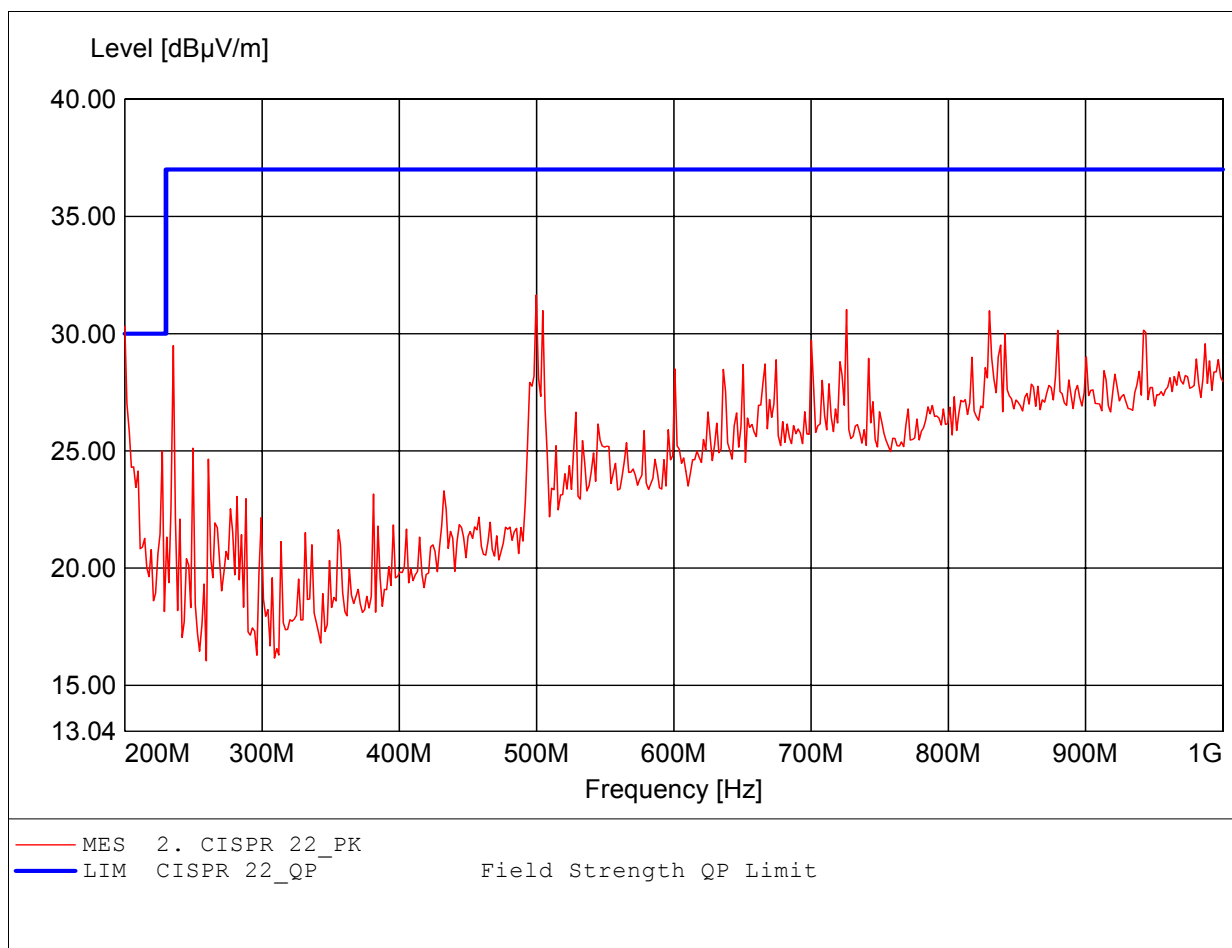
**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:PS2  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HK 116  
Freq:165.251MHz Emax:27.67dBµV/m RBW: 100 kHz



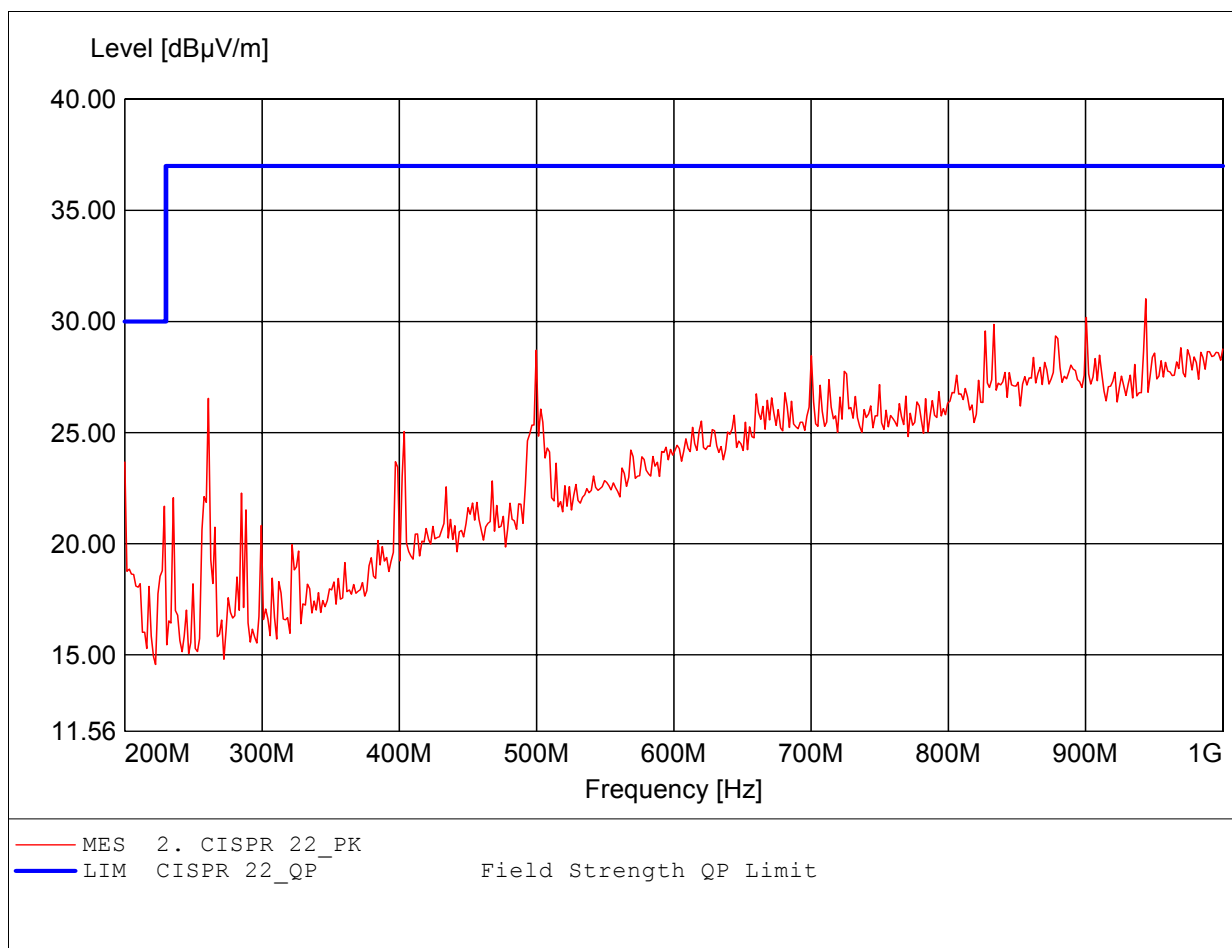
**Spurious emissions under normal conditions**  
**in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:PS/2  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223  
Freq:499.800MHz Emax:31.66dBµV/m RBW: 100 kHz

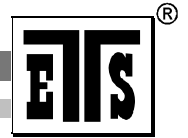


**Spurious emissions under normal conditions  
in accordance to the CISPR 22**

Order Number : W6M20607-7237 mode:PS/2  
Test Site / Operator: ETS /Jason  
Temperature/Voltage: Temp.: 23.9°C/ Unom.: 5 VDC (power on PC)  
Test Specification: Fully Anechoic Chamber  
Comment 1: Dist.: 3m, Ant.: HL 223  
Freq:943.888MHz Emax:31.02dBμV/m RBW: 100 kHz







## **Appendix B**

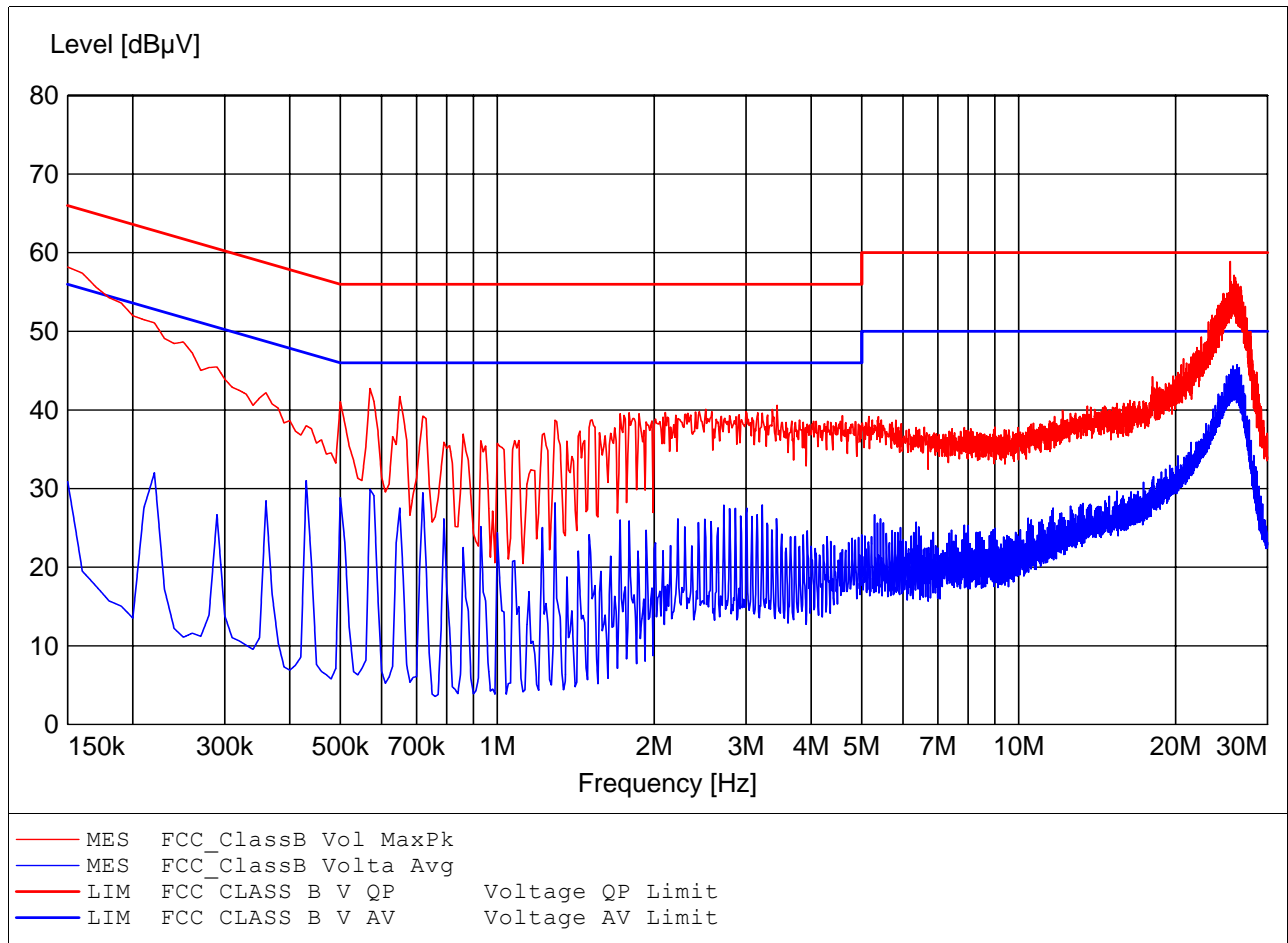
### Conducted Emission

**The measurement diagrams plots attached below are preliminary wideband scan with a peak and average detector for reference only. The test results are listed on section on 2.5.2**

**EMI voltage test in the ac-mains according to FCC PART 15**

**CLASS B**

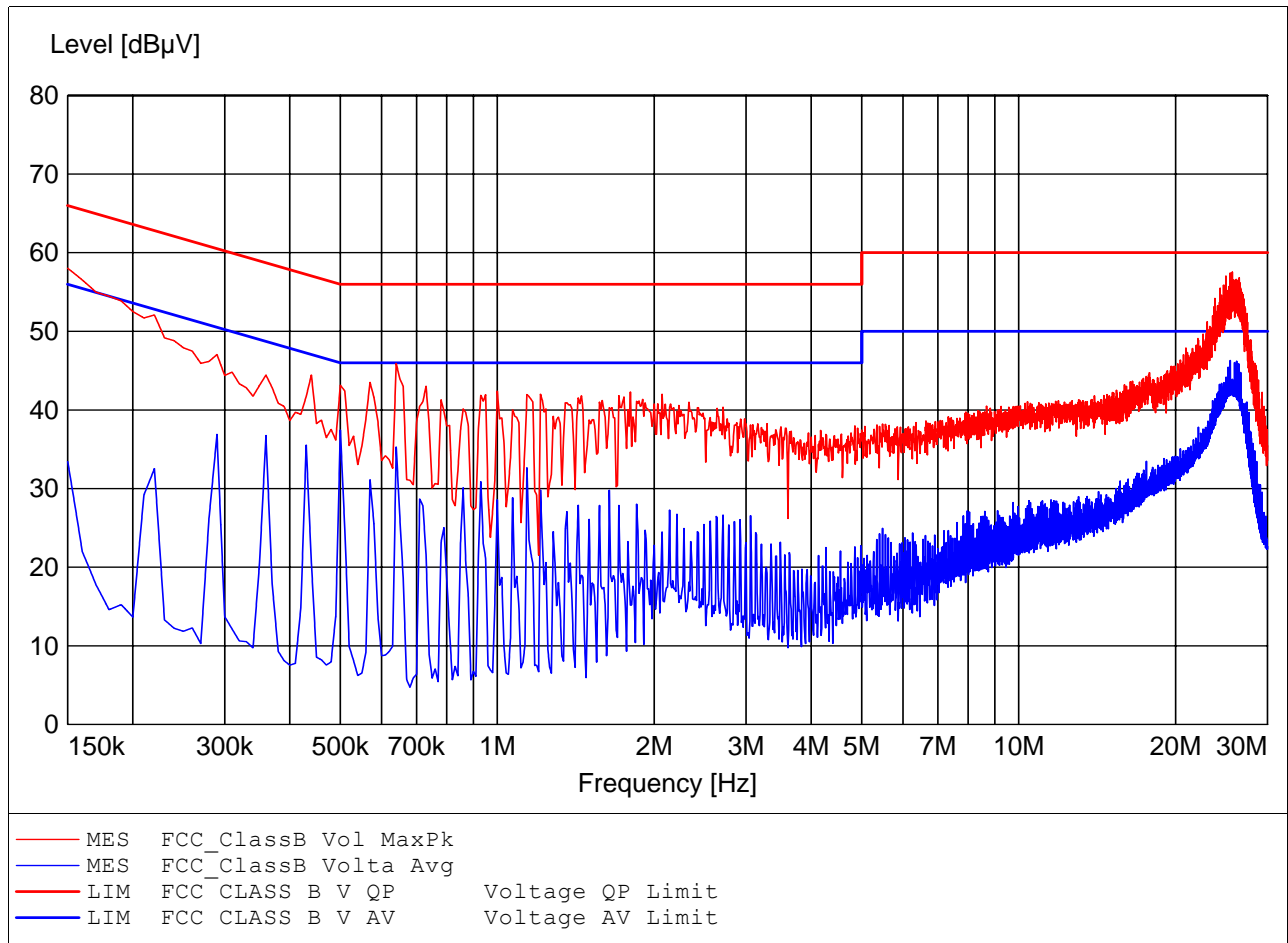
Order Number: W6M20607-7237 mode:USB  
Operating Condition: Unom: 5 VDC( power on PC ) , Tnom: 23.9°C  
Test Site: ETS  
Operator: Jason  
Test Specification: V-network: ESH3-Z5 N



**EMI voltage test in the ac-mains according to FCC PART 15**

**CLASS B**

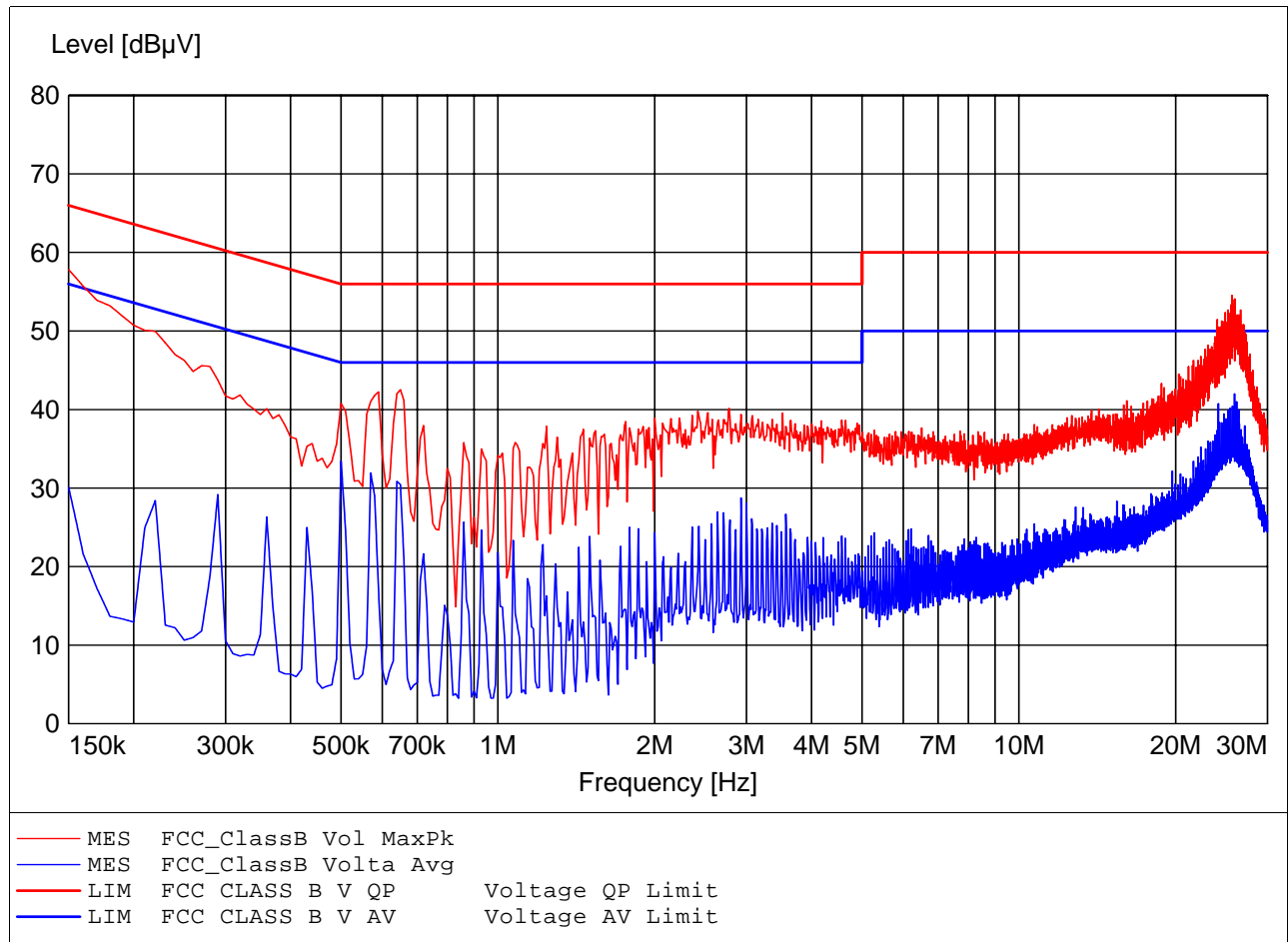
Order Number: W6M20607-7237 mode:USB  
Operating Condition: Unom: 5 VDC( power on PC ) , Tnom: 23.9°C  
Test Site: ETS  
Operator: Jason  
Test Specification: V-network: ESH3-Z5 L1



**EMI voltage test in the ac-mains according to FCC PART 15**

**CLASS B**

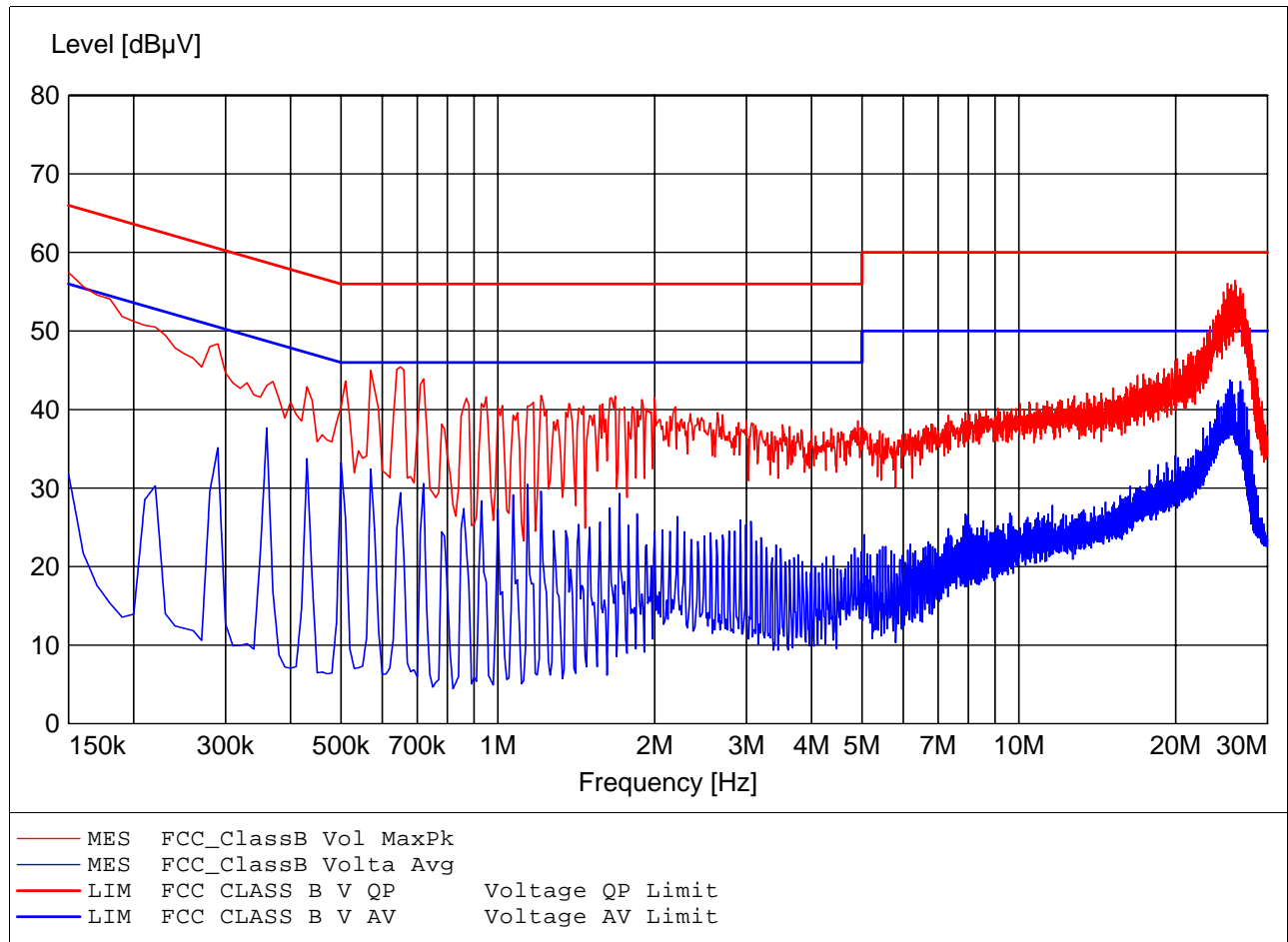
Order Number: W6M20607-7237 mode:PS/2  
Operating Condition: Unom: 5 VDC ( power on PC ) , Tnom: 23.9°C  
Test Site: ETS  
Operator: Jason  
Test Specification: V-network: ESH3-Z5 N



**EMI voltage test in the ac-mains according to FCC PART 15**

**CLASS B**

Order Number: W6M20607-7237 mode:PS/2  
Operating Condition: Unom: 5 VDC ( power on PC ) , Tnom: 23.9°C  
Test Site: ETS  
Operator: Jason  
Test Specification: V-network: ESH3-Z5 L1





## Appendix C

Pictures