

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-AB0001

Test report no.: W6M20606-7090-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

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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.

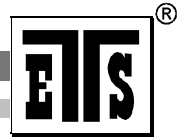
Furthermore, there is no guarantee that a test sample which has Passed all the relevant tests conforms to a specification (only telecommunication products).

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.

Reproduction or publication of extracts from the report requires the prior written approval of the ETS Dr.Geniz Taiwan PS Co., Ltd.



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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.



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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: W6M20606-7090-P-15B

FCC ID: P5A-AB0001

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
Teletex : ./.

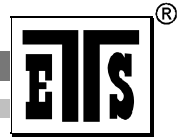
1.5 Application details

Date of receipt of application : Jun 26, 2006
Date of receipt of test item : Jun 27, 2006
Date of test : From Jun 28, 2006 to June 30, 2006

1.6 Test item

1.6.1 Description of test item

Type of product : Optical Mouse
Type identification : B55 USB, B55 PS/2, B55 USB & PS/2
Serial No. : ./.
Brand Name : ./.
Photos : Please find in Appendix.



Registration number: W6M20606-7090-P-15B
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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 |
|-------------------------|----------|

1.7 Test standards

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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: | 120 VAC (power on PC) |
| Other parameters: | without |

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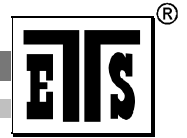
2.3 Test equipment utilized

| 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 002 | PREREULATOR MODE DC POWER SUPPLY | None | None | T-POWER | Function Test | |
| 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-CS 001 | SIGNAL GENERATOR | SMX | 849254/003 | R&S | 2005/10/14 | 2006/10/13 |
| ETSTW-CS 002 | COUPLING AND DECOUPLING NETWORK | CDN S751 | 19263 | SCHAFFNER | 2005/10/14 | 2006/10/13 |
| ETSTW-CS 003 | COUPLING AND DECOUPLING NETWORK | CDN T400 | 19820 | SCHAFFNER | 2005/10/14 | 2006/10/13 |
| ETSTW-CS 004 | COUPLING AND DECOUPLING NETWORK | CDN M016 | 20053 | SCHAFFNER | 2005/10/27 | 2006/10/26 |
| ETSTW-CS 005 | RF Power Amplifier | 100A250A | 306547 | AR | 2005/10/14 | 2006/10/13 |
| 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 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 026 | Open Area Test Site | 10m | None | ETS | NSA Measurement | |
| 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 |

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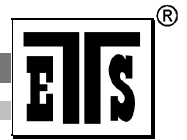
FCC ID: P5A-AB0001

| | | | | | | |
|---------------|---------------------------------------|----------------|---------------|----------------|---------------|------------|
| 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 |
| 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 001 | Clamp BASELSTRASSE 160 CH-4242 LAUFEN | CN-EFT1000 | 354 | EMC-PARTNER | 2004/11/2 | 2006/11/1 |
| ETSTW-EMS 002 | Frequency Converter | YF-6020 | 0308014 | T-POWER | Function Test | |
| ETSTW-EMS 003 | EMC Immunity Test System | TRA2000IN6 | 579 | EMC-PARTNER | 2005/10/27 | 2006/10/26 |
| ETSTW-EMS 004 | ESD generator minizap | ESD2000 | 016 | EMC-PARTNER | 2005/10/27 | 2006/10/26 |
| ETSTW-EMS 005 | Attenautor (50Ω) | VERI50 | 051 | EMC-PARTNER | 2004/8/31 | 2006/8/30 |
| ETSTW-EMS 006 | Attenautor (1 KΩ) | VERI1K | 019 | EMC-PARTNER | 2004/10/21 | 2006/10/20 |
| ETSTW-EMS 008 | Safety Test Solutions | ELT-400 | E-0039 | Narda | 2005/5/4 | 2007/5/3 |
| ETSTW-EMS 009 | Magnetic Field Antenna | MF1000-1 | 104 | EMC-PARTNER | 2004/12/3 | 2007/12/2 |
| ETSTW-EMS 010 | Coupling De-coupling Network | CDN-UTP8 | 014 | EMC-PARTNER | 2005/9/1 | 2008/8/31 |
| ETSTW-EMS 011 | Calibration Fixture | F-2031-CF-23MM | 451 | FCC | 2005/8/11 | 2007/8/11 |
| ETSTW-EMS 012 | EM Injection Clamp | F-2031-23MM | 476 | FCC | 2005/8/11 | 2007/8/10 |
| ETSTW-RS 003 | RF Power Amplifier | 30S1G3 | 306933 | AR | Function Test | |
| ETSTW-RS 004 | RF Power Amplifier | 150W1000 | 307009 | AR | 2005/10/21 | 2006/10/20 |
| ETSTW-RS 005 | Electric Field Probe Type 8.3 | EMR-20 | BN 2244/20 | Narda | 2005/9/7 | 2007/9/6 |
| ETSTW-RS 006 | SIGNAL GENERATOR | SML03 | 101551 | R&S | 2005/10/21 | 2006/10/20 |
| 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 | 2004/7/14 | 2006/7/13 |
| ETSTW-GSM 04 | Agilent 8960 Test Set 2 | E5515C | GB44052665 | Agilent | 2004/7/14 | 2006/7/13 |
| ETSTW-GSM 05 | Agilent 8960 Test Set 3 | E5515C | GB44052652 | Agilent | 2004/7/17 | 2006/7/16 |
| ETSTW-GSM 06 | Agilent 8960 Test Set 4 | E5515C | GB44052684 | Agilent | 2004/7/16 | 2006/7/15 |
| ETSTW-GSM 07 | Agilent 8960 Test Set 5 | E5515C | GB44052658 | Agilent | 2004/7/14 | 2006/7/13 |
| ETSTW-GSM 08 | Agilent 8960 Test Set 6 | E5515C | GB44052666 | Agilent | 2004/7/16 | 2006/7/15 |
| ETSTW-GSM 09 | Controller PC | Dell GX 270 | 700F61J | Dell | Function Test | |
| ETSTW-GSM 10 | Combiner Wessex / Anite | B4605/100 | 053 | Wessex / Anite | 2004/7/14 | 2006/7/13 |



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| | | | | | | |
|--------------|-----------------------------------|-----------------|------------|-------------|------------|------------|
| 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 13 | Conditioning Amplifier | 2690--0S2 | 2437856 | Brüel&Kjær | | |
| ETSTW-GSM 14 | Telephone Test Head | 4602B | 2465324 | Brüel&Kjær | | |
| ETSTW-GSM 15 | Mouth Simulator | 4227 | 2462516 | Brüel&Kjær | | |
| 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 |



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2.4 Test results

1st test
 test after modification
 production test

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

2.4.1 Radiated Emission

2.4.1.1 Test Equipment

a) Antenna (HK116)

For your reference please find it in our test equipment list at page 9 to 11 as number : ETSTW-RE 015

b) Antenna (HL223)

For your reference please find it in our test equipment list at page 9 to 11 as number : ETSTW-RE 016

c) Antenna (HL025)

For your reference please find it in our test equipment list at page 9 to 11 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 11 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 11 as number : ETSTW-RE 026

f) ESI-26

For your reference please find it in our test equipment list at page 9 to 11 as number : ETSTW-RE 003

g) Anechoic Chamber

For your reference please find it in our test equipment list at page 9 to 11 as number : ETSTW-RE 025

2.4.1.2 Test Procedures

- Test configuration

The test configuration corresponds to the standard CISPR 22. 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 10m. 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 1000 MHz . Further information please find in the test protocol.

2.4.2 Conducted Emission

2.4.2.1 Test Equipment

a) Artificial mains (ESH3-Z5)

For your reference please find it in our test equipment list at page 9 to 11 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 11 as number : ETSTW-CE 006

c) Test receiver (ESHS10)

For your reference please find it in our test equipment list at page 9 to 11 as number : ETSTW-CE 001

d) Shielded room

For your reference please find it in our test equipment list at page 9 to 11 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 11 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 11 as number : ETSTW-GSM 02

- 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.

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2.5 Test protocols

2.5.1 Radiated Emission

Radio Noise Field Strength

Emission

Standard : FCC part 15B

Reg.-no. : W6M20606-7090-P-15B

Device : B55 USB, B55 PS/2, B55 USB & PS/2

Date : July 04, 2006

Class : B

| | |
|---------------|-----------|
| Temperature | : 24.3 °C |
| Pressure | : 939 hPa |
| Rel. humidity | : 49 % |

| Frequency Range Polarization | Limit $\mu\text{V/m}$ | 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: W6M20606-7090-P-15B

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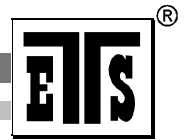
Standard : FCC part 15BReg.-no. : W6M20606-7090-P-15BDevice : B55 USB, B55 PS/2, B55 USB & PS/2Date : July 04, 2006Class : B

| |
|-----------------------|
| Temperature : 24.4 °C |
| Pressure : 939 hPa |
| Rel. humidity: 51 % |

**Summary table with radiated data of the test plots
(PS2 mode)**

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuv) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H | 48.056 | 19.75 | 13.68 | PK | 33.43 | 40 | 6.57 | 218 | 310 |
| | 102.565 | 26.55 | 11.49 | PK | 38.04 | 46 | 7.96 | 310 | 322 |
| | 166.272 | 22.77 | 15 | PK | 37.77 | 46 | 8.23 | 211 | 340 |
| | 238.476 | 21 | 13.57 | PK | 34.57 | 46 | 11.43 | 190 | 320 |
| | 499.799 | 17.57 | 19.81 | PK | 37.38 | 46 | 8.62 | 62 | 307 |
| | 661.723 | 18.26 | 22.8 | PK | 41.06 | 46 | 4.94 | 87 | 300 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuv) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V | 42.945 | 24.72 | 13.58 | PK | 38.3 | 40 | 1.7 | 172 | 195 |
| | 66.452 | 15.38 | 13.41 | PK | 28.79 | 40 | 11.21 | 200 | 180 |
| | 102.565 | 30.43 | 11.49 | PK | 41.92 | 43.5 | 1.58 | 340 | 201 |
| | 172.064 | 32.81 | 14.97 | PK | 37.78 | 43.5 | 5.72 | 270 | 211 |
| | 196.593 | 27.57 | 12.14 | PK | 39.71 | 43.5 | 3.79 | 95 | 213 |
| | 212.825 | 19.98 | 12.68 | PK | 32.66 | 43.5 | 10.84 | 105 | 190 |
| | 672.945 | 34.27 | 22.95 | PK | 37.22 | 46 | 8.78 | 124 | 188 |



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(USB mode)

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuv) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| H | 233.667 | 19.77 | 13.57 | PK | 33.34 | 46 | 12.66 | 180 | 305 |
| | 499.799 | 20.23 | 19.81 | PK | 40.04 | 46 | 5.96 | 219 | 310 |
| | 600.801 | 18.01 | 22.18 | PK | 40.19 | 46 | 5.81 | 250 | 307 |
| | 653.707 | 16.98 | 22.78 | PK | 39.76 | 46 | 6.24 | 310 | 331 |
| | 47.715 | 15.02 | 13.68 | PK | 28.7 | 40 | 11.3 | 65 | 320 |
| | 81.442 | 21.62 | 10 | PK | 31.62 | 40 | 8.38 | 98 | 315 |
| | 102.565 | 27.93 | 11.49 | PK | 39.42 | 46 | 6.58 | 217 | 308 |
| | 117.895 | 19.85 | 12.68 | PK | 32.53 | 46 | 13.47 | 302 | 311 |

| Antenna Polarization | Frequency Marker (MHz) | Corrected Reading (dBuv) | Correction Factor (dB) | Detector | Test Result (dBuV/m) | Compliance Limit (dBuV/m) | Margin (dB) | Table Azimuth (degree) | Antenna Height (cm) |
|----------------------|------------------------|--------------------------|------------------------|----------|----------------------|---------------------------|-------------|------------------------|---------------------|
| V | 228.857 | 19.35 | 13.1 | PK | 32.45 | 46 | 13.55 | 240 | 190 |
| | 480.561 | 17.08 | 19.59 | PK | 36.67 | 46 | 9.33 | 200 | 208 |
| | 661.723 | 13.24 | 22.8 | PK | 36.04 | 46 | 9.96 | 186 | 210 |
| | 47.715 | 21.61 | 13.68 | PK | 35.29 | 40 | 4.74 | 320 | 195 |
| | 87.575 | 26 | 10 | PK | 36 | 40 | 4 | 90 | 182 |
| | 113.126 | 19.86 | 12.41 | PK | 32.27 | 46 | 7.73 | 255 | 200 |

- 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

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2.5.2 Conducted Emission

Conducted Emission

Emission

Standard : FCC part 15B

Reg.-no. : W6M20606-7090-P-15B

Device : B55 USB, B55 PS/2, B55 USB & PS/2

Date : July 04, 2006

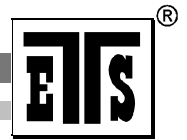
Class : B

| | |
|---------------|-----------|
| Temperature | : 24.3 °C |
| Pressure | : 939 hPa |
| Rel. humidity | : 49 % |

| Frequency Range | Limit DbuV | | 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: W6M20606-7090-P-15B
 FCC ID: P5A-AB0001

Standard : FCC part 15B

Reg.-no. : W6M20606-7090-P-15B

Device : B55 USB, B55 PS/2, B55 USB & PS/2

Date : July 04, 2006

Class : B

Temperature : 24.2 °C
 Pressure : 939 hPa
 Rel. humidity: 50 %

(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 |
| | 0.15 | 32.3 | 15.7 | 10.1 | 42.4 | 25.8 | 66 | 56 | 23.6 | 30.2 |
| | 0.285 | 29.3 | 11.5 | 10.1 | 39.4 | 21.6 | 60.67 | 50.67 | 21.27 | 29.07 |
| | 0.645 | 23.3 | 10.6 | 10.1 | 33.4 | 20.7 | 56 | 46 | 22.6 | 25.3 |
| | 25.825 | 29.8 | 21.5 | 10.1 | 39.9 | 31.6 | 60 | 50 | 20.1 | 18.4 |
| | 0.575 | 21.1 | 10.7 | 10.1 | 31.2 | 20.8 | 56 | 46 | 24.8 | 25.2 |

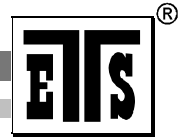
| LISN type | Frequency Marker | Corrected Reading (dBuV) | | Correction Factor | Test Result (dBuV) | | Compliance Limit (dBuV) | | Margin (dB) | |
|-----------|------------------|--------------------------|------|-------------------|--------------------|------|-------------------------|-------|-------------|-------|
| | | QP | AV | | dB | QP | AV | QP | AV | QP |
| L1 | MHz | QP | AV | dB | QP | AV | QP | AV | QP | AV |
| | 0.15 | 32.9 | 14.3 | 10.1 | 43 | 24.4 | 66 | 56 | 23 | 31.6 |
| | 0.22 | 24.8 | 12.7 | 10.1 | 34.9 | 22.8 | 62.81 | 52.81 | 27.91 | 30.01 |
| | 0.51 | 20.8 | 11.4 | 10.1 | 30.9 | 21.5 | 56 | 46 | 25.1 | 24.5 |
| | 0.655 | 22.1 | 10.5 | 10.1 | 32.2 | 20.6 | 56 | 46 | 23.8 | 25.4 |
| | 23.55 | 25.1 | 17.8 | 10.1 | 35.2 | 27.9 | 60 | 50 | 24.8 | 22.1 |
| | 26.16 | 29.5 | 22.3 | 10.1 | 39.6 | 32.4 | 60 | 50 | 20.4 | 17.6 |
| | 26.52 | 29.7 | 22.1 | 10.1 | 39.8 | 32.2 | 60 | 50 | 20.2 | 17.8 |

(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 |
| | 0.15 | 32.2 | 15.1 | 10.1 | 42.3 | 25.2 | 66 | 56 | 23.7 | 30.8 |
| | 0.285 | 29.2 | 11.4 | 10.1 | 39.3 | 21.5 | 60.67 | 50.67 | 21.37 | 29.17 |
| | 0.57 | 22.2 | 10.5 | 10.1 | 32.3 | 20.6 | 56 | 46 | 23.7 | 25.4 |
| | 0.64 | 23.8 | 11.1 | 10.1 | 33.9 | 21.2 | 56 | 46 | 22.1 | 24.8 |
| | 25.45 | 29.5 | 22.2 | 10.1 | 39.6 | 32.3 | 60 | 50 | 20.4 | 17.7 |

| 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 |
| | 0.15 | 32.5 | 14.6 | 10.1 | 42.6 | 24.7 | 66 | 56 | 23.4 | 31.3 |
| | 0.215 | 23.3 | 13 | 10.1 | 33.4 | 23.1 | 62.81 | 52.81 | 29.41 | 29.71 |
| | 0.575 | 21.5 | 10.7 | 10.1 | 31.6 | 20.8 | 56 | 46 | 24.4 | 25.2 |
| | 0.645 | 22.7 | 10.1 | 10.1 | 32.8 | 20.2 | 56 | 46 | 23.2 | 25.8 |
| | 26 | 29.5 | 22.7 | 10.1 | 39.6 | 32.8 | 60 | 50 | 20.4 | 17.2 |

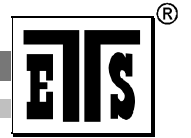
- Note:**
1. The formula of measured value as: **Test Result = Corrected Reading + Correction Factor**
 2. The **Correction Factor = Cable Loss + LISN Insertion Loss – Pulse Limit Loss**
 3. Detector function in the form : **P = Peak, QP = Quasi Peak, AV = Average**



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2.6 Equipment Modification

No modification was made to pass all tests.



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3 Normative references

- /1/ FCC part 15
Radio Frequency Devises

- /2/ CISPR 22
Limits and Methods of Measurement of Radio Interference Characteristics of Information
Technology Equipment



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Appendix

- A Radiated Emission
- B Conducted Emission
- C Pictures



Registration number: W6M20606-7090-P-15B
FCC ID: P5A-AB0001

Appendix A

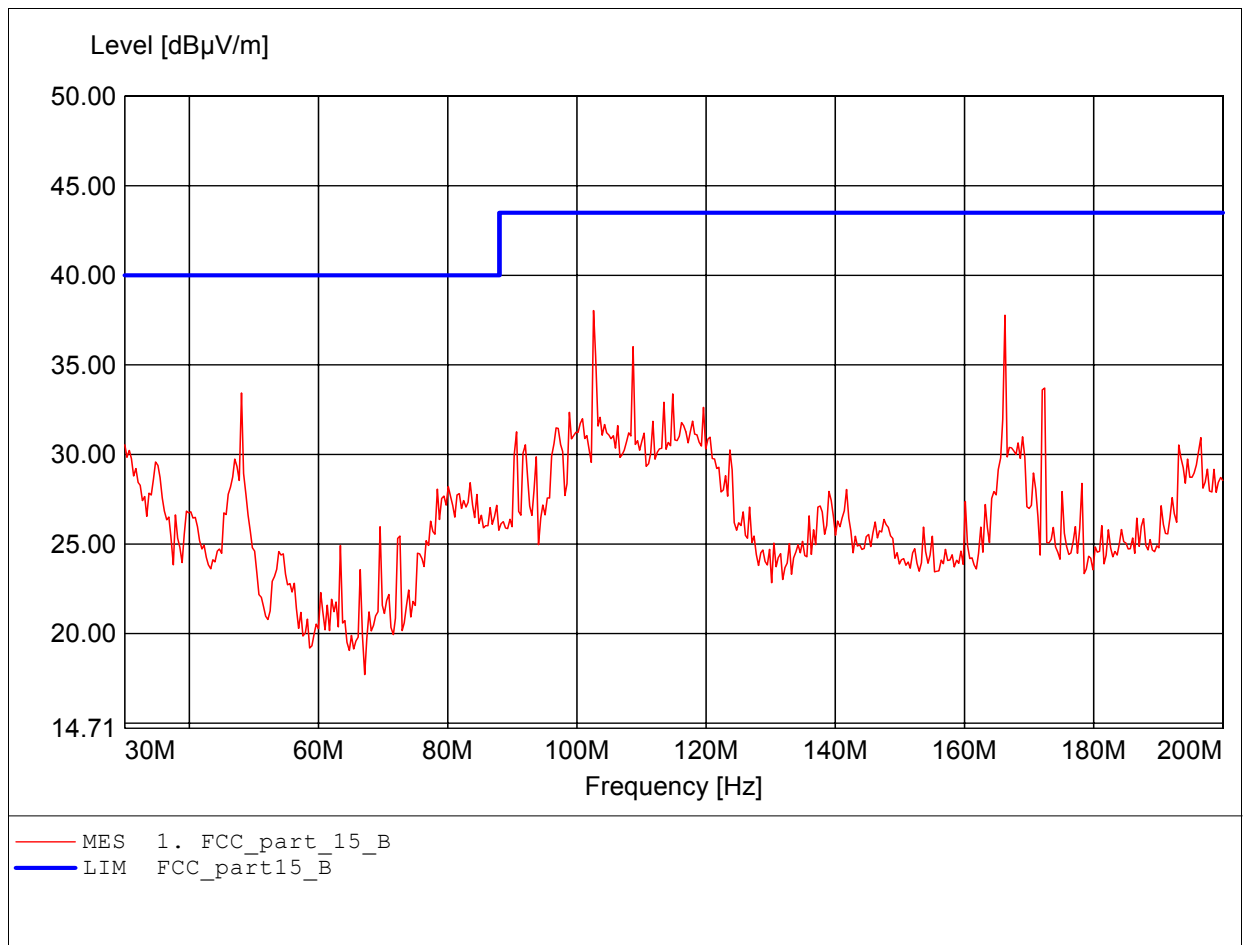
Radiated Emission

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

Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

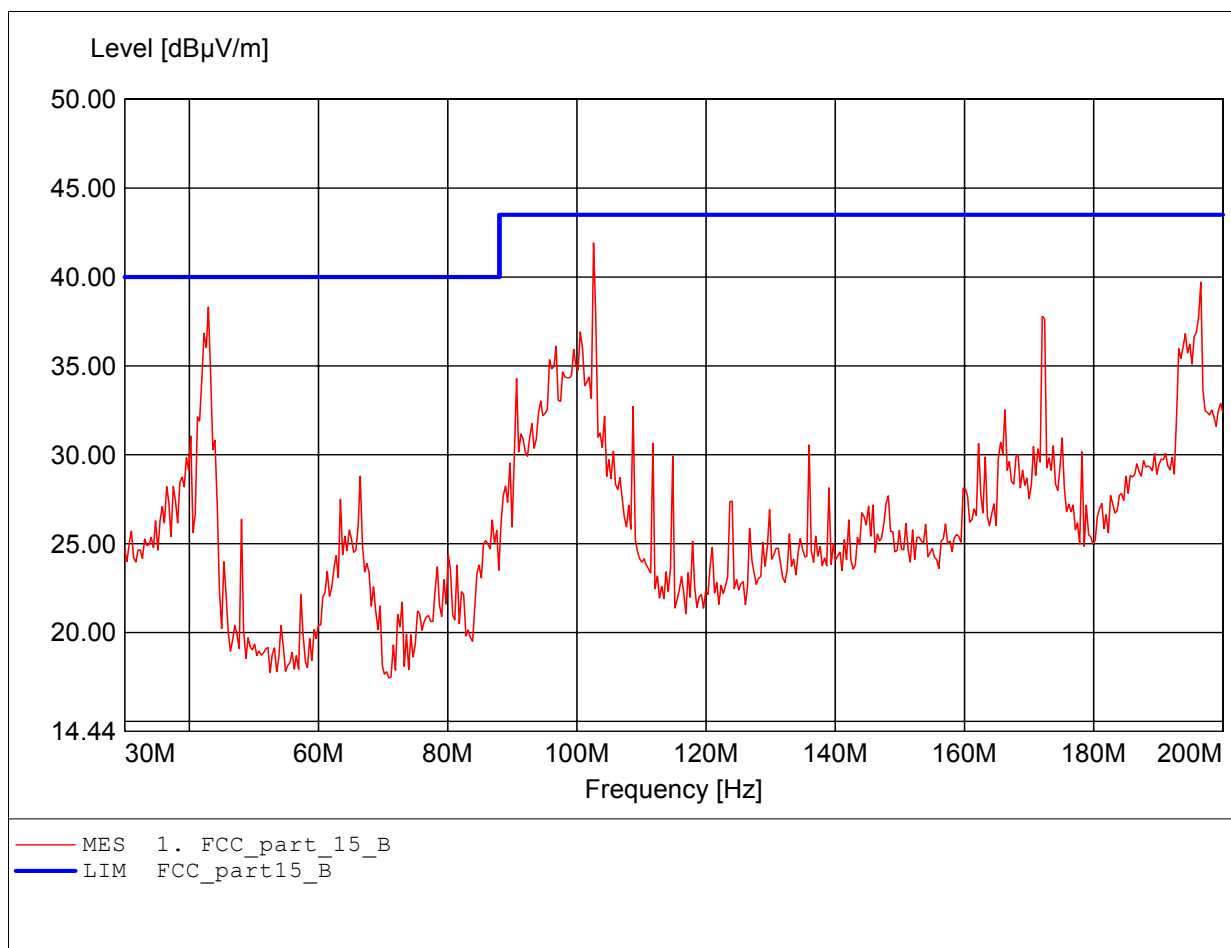
Order Number: W6M20606-7090 PS2 mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:102.565MHz Emax:38.04dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

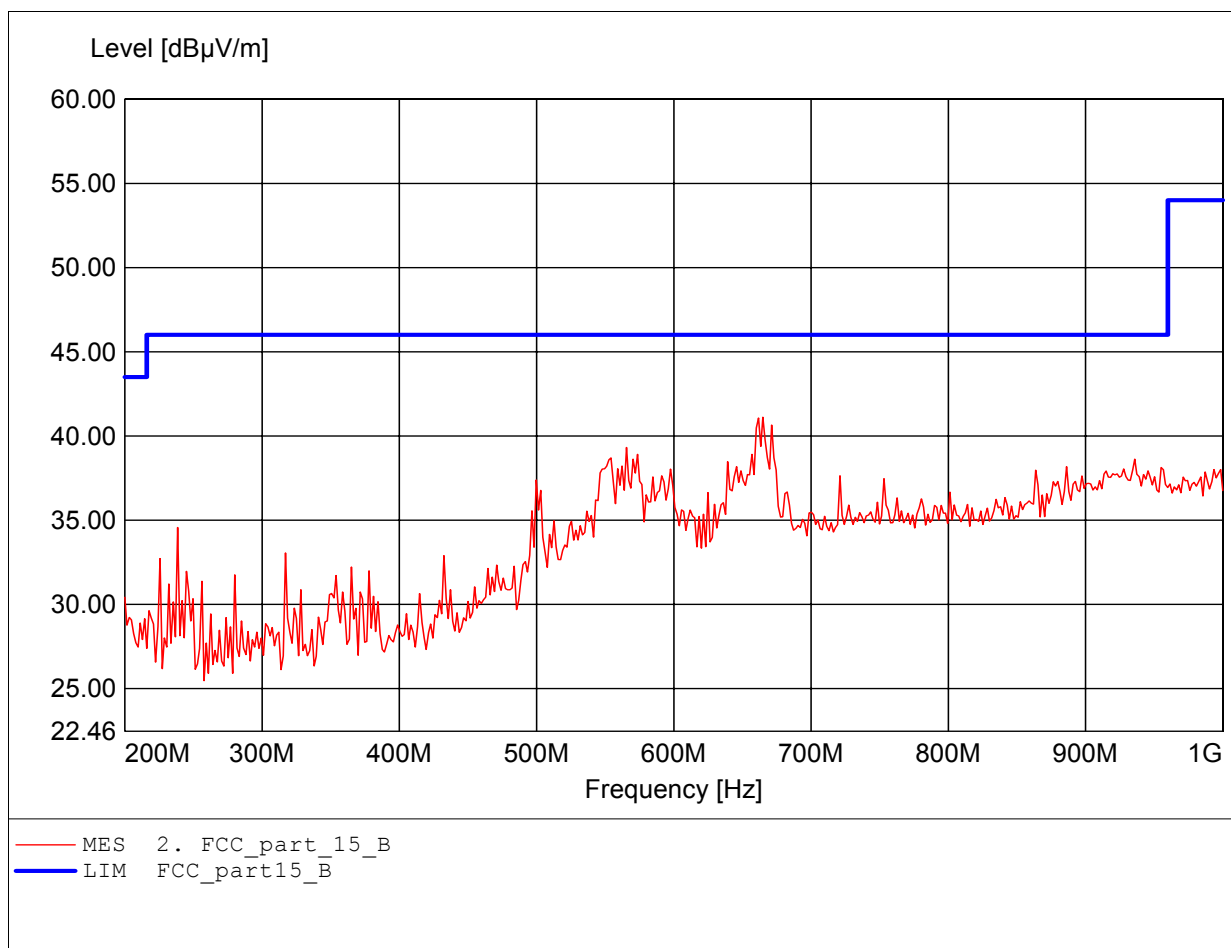
Order Number: W6M20606-7090 PS2 mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:102.565MHz Emax:41.92dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

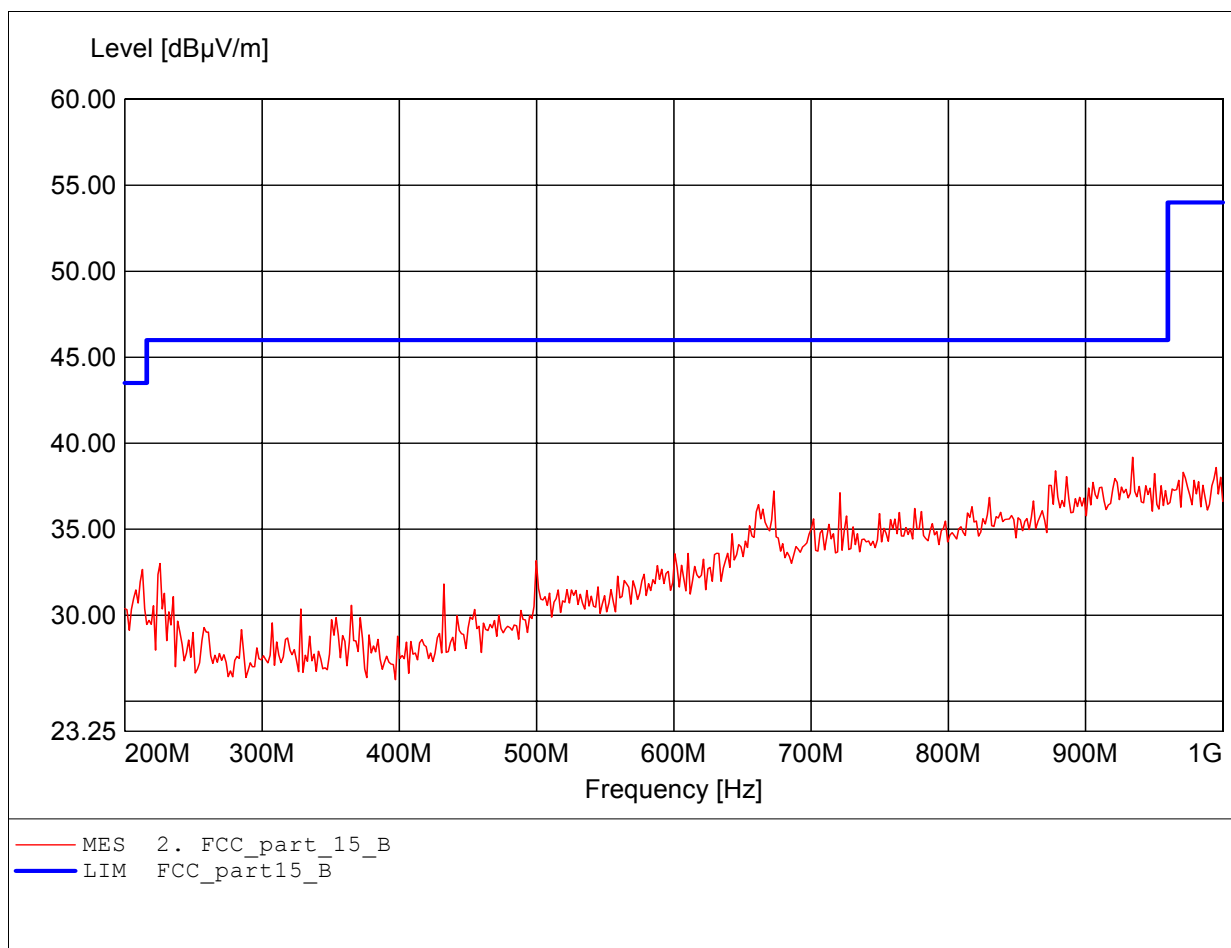
Order Number: W6M20606-7090 PS2 mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:664.930MHz Emax:41.11dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

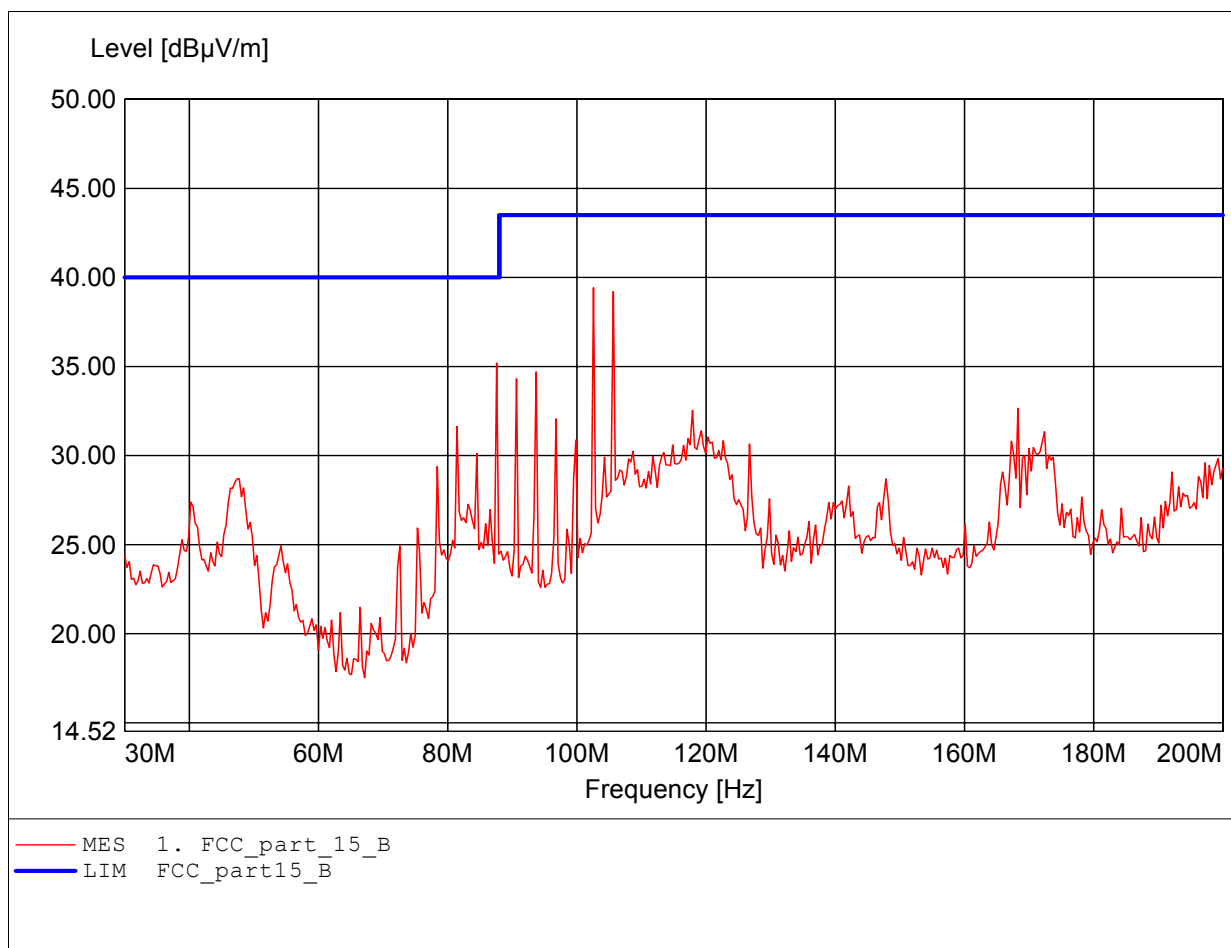
Order Number: W6M20606-7090 PS2 mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:934.269MHz Emax:39.18dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

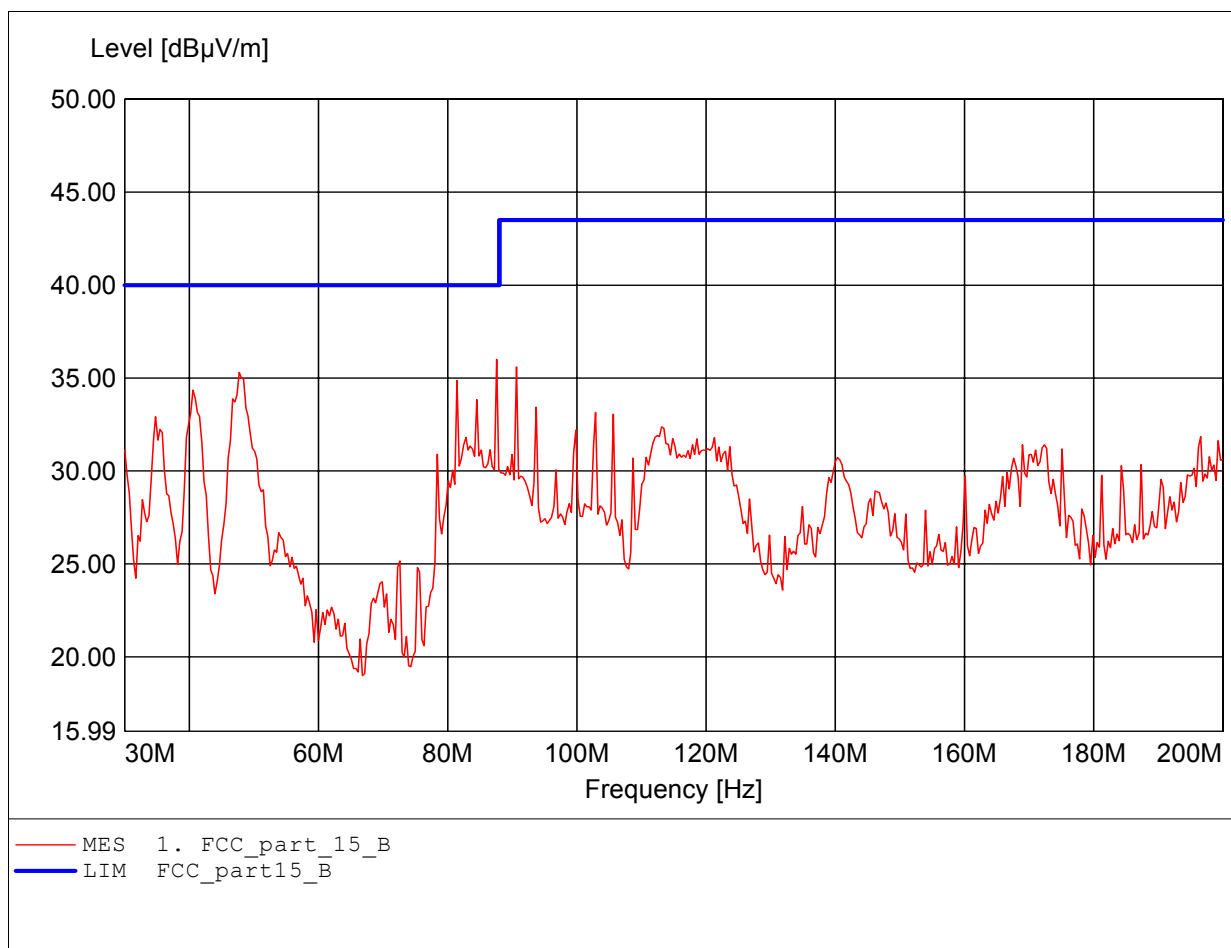
Order Number: W6M20606-7090 USB mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:102.565MHz Emax:39.42dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

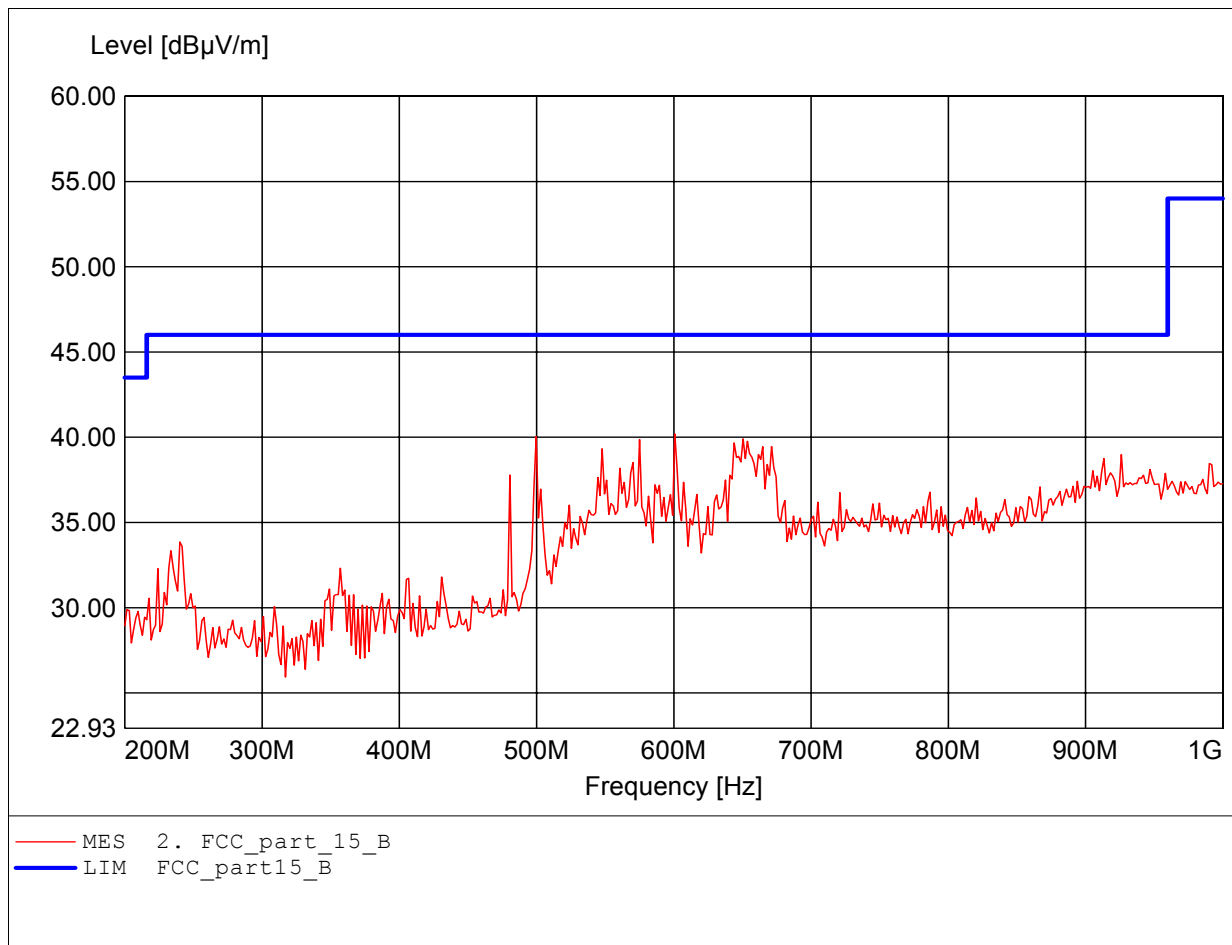
Order Number: W6M20606-7090 USB mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:87.575MHz Emax:36.00dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

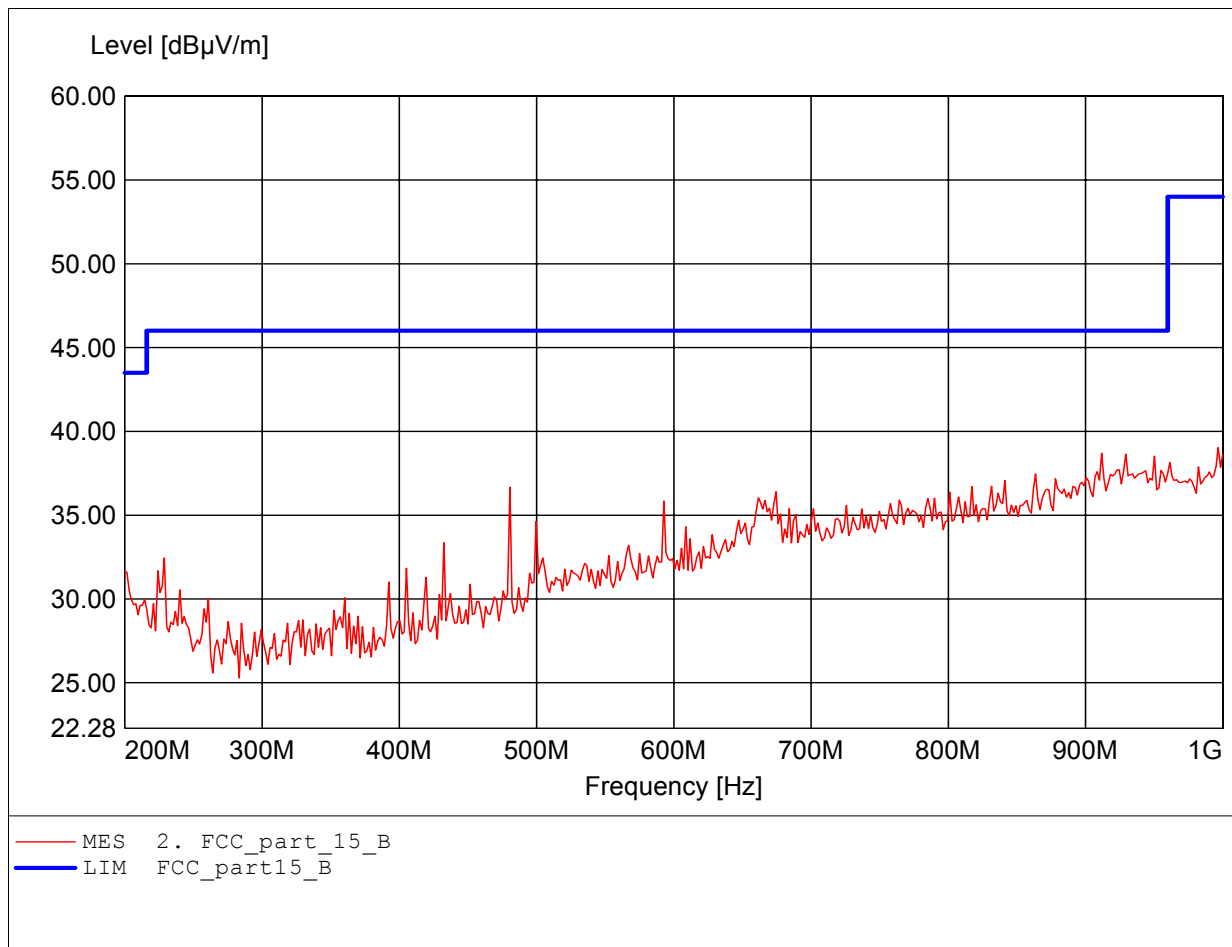
Order Number: W6M20606-7090 USB mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:600.802MHz Emax:40.19dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

Order Number: W6M20606-7090 USB mode
Test Site / Operator: ETS / Catey
Temperature/Voltage: Temp.: 22.4°C/ Unom.: 120 VAC (power on PC)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:996.794MHz Emax:39.02dBμV/m RBW: 100 kHz





Registration number: W6M20606-7090-P-15B
FCC ID: P5A-AB0001

Appendix B

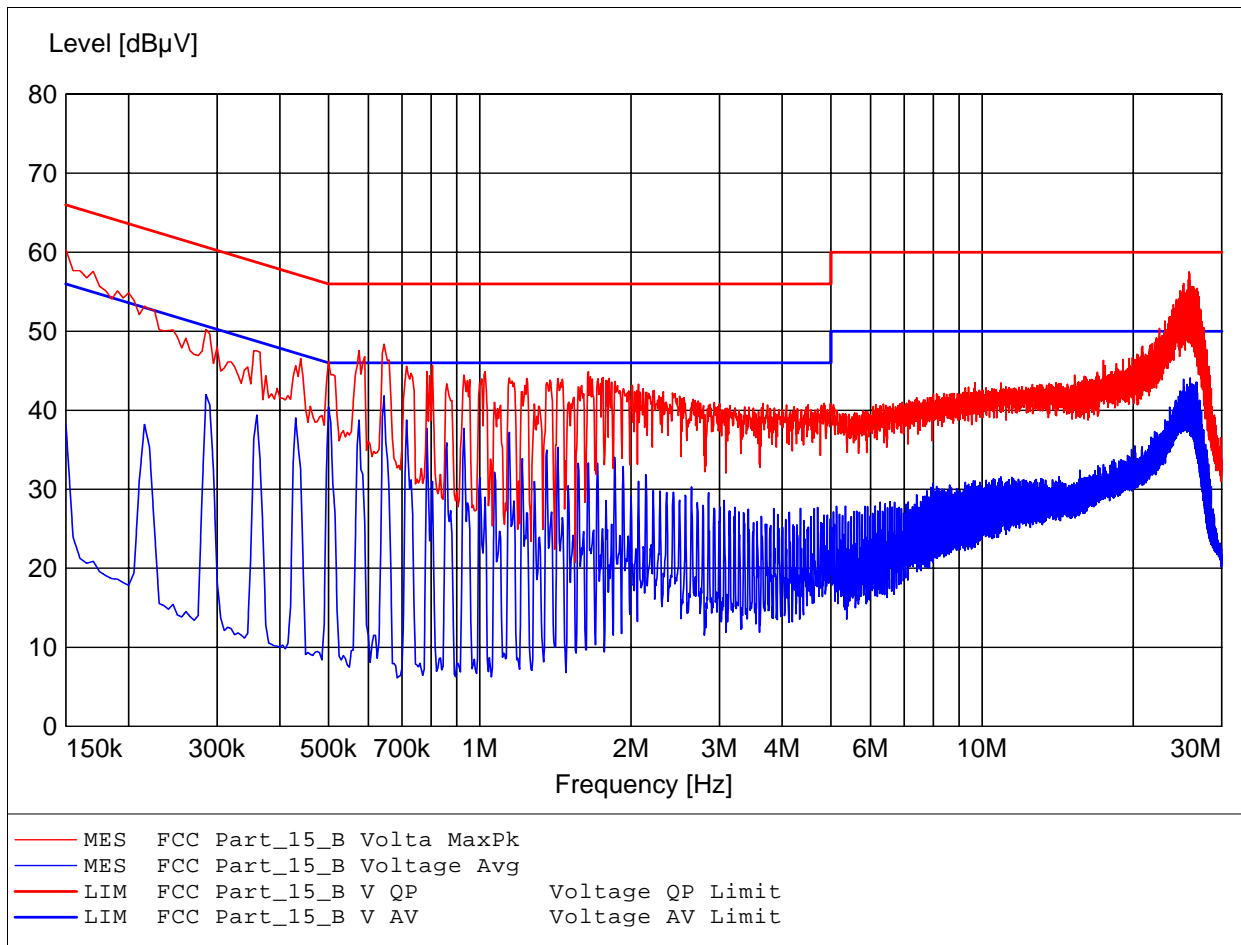
Conducted Emission

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 2.5.2.

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

Class B

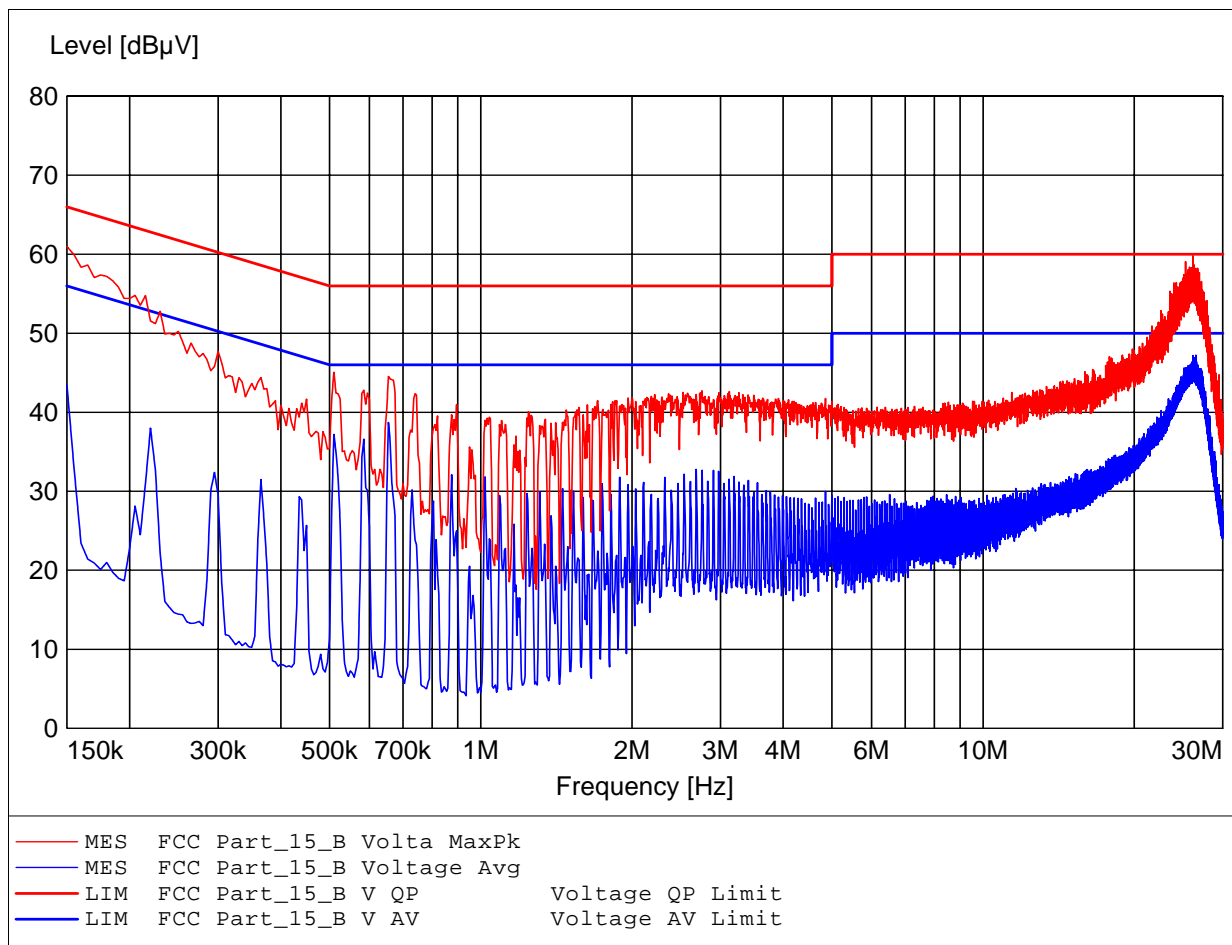
EUT: Optical Mouse PS2 mode
Approval Holder: ARESON Technology Corp. (Taiwan)
Operating Condition: Unom : 120 VAC (power or pc) Tnom : 24.2°C
Test Site: ETS
Operator: Eric
Test Specification: V-network: ESH3-Z5 N
Comment: model: B55 USB, B55 PS/2, B55 USB & PS/2 mode: active



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

Class B

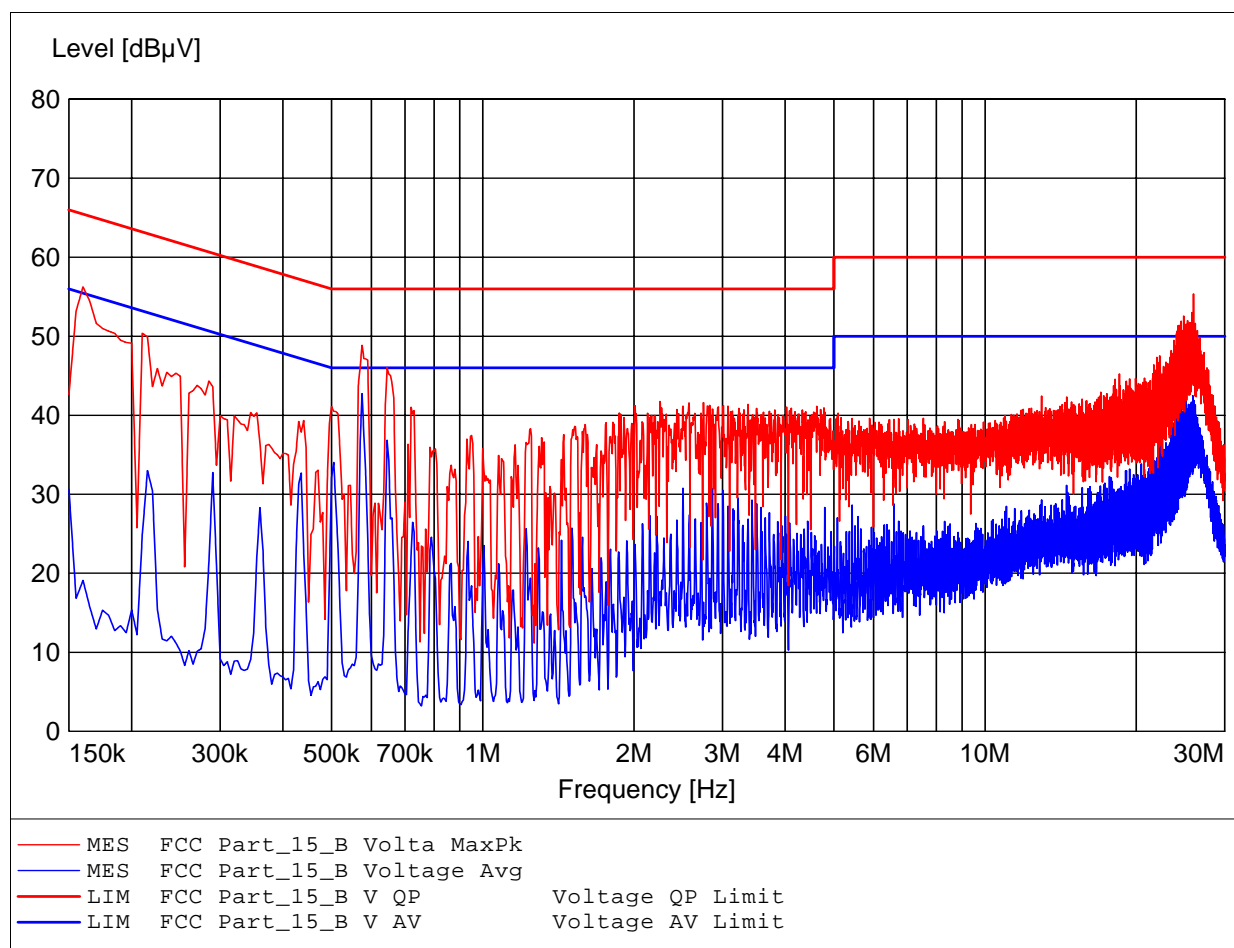
EUT: Optical Mouse PS2 mode
 Approval Holder: ARESON Technology Corp. (Taiwan)
 Operating Condition: Unom : 120 VAC (power or pc) Tnom : 24.2°C
 Test Site: ETS
 Operator: Eric
 Test Specification: V-network: ESH3-Z5 L1
 Comment: model: B55 USB, B55 PS/2, B55 USB & PS/2 mode: active



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

Class B

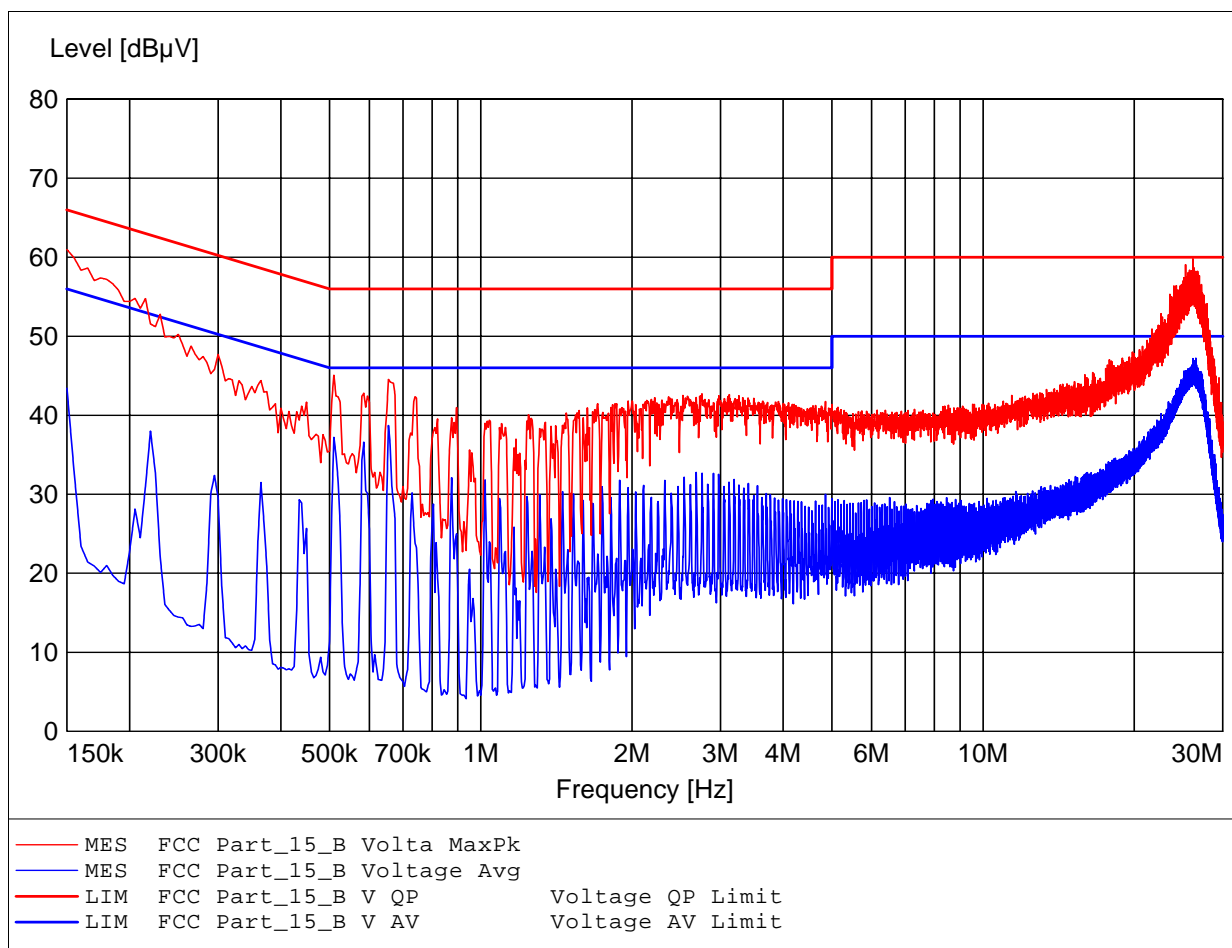
EUT: Optical Mouse USB mode
Approval Holder: ARESON Technology Corp. (Taiwan)
Operating Condition: Unom : 120 VAC (power or pc) Tnom : 24.2°C
Test Site: ETS
Operator: Eric
Test Specification: V-network: ESH3-Z5 N
Comment: model: B55 USB, B55 PS/2, B55 USB & PS/2 mode: active



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

Class B

EUT: Optical Mouse USB mode
 Approval Holder: ARESON Technology Corp. (Taiwan)
 Operating Condition: Unom : 120 VAC (power or pc) Tnom : 24.2°C
 Test Site: ETS
 Operator: Eric
 Test Specification: V-network: ESH3-Z5 L1
 Comment: model: B55 USB, B55 PS/2, B55 USB & PS/2 mode: active





Registration number: W6M20606-7090-P-15B
FCC ID: P5A-AB0001

Appendix C

Pictures