

FCC TEST REPORT

for

USB 2.0 Graphic Card

Model No.: UVT100

of

Applicant: Magic Control Technology Corporation
Address: 6F, .#120-11, Chung Shan Rd, Sec. 3, Chung Ho, 235 Taipei,
Taiwan, R. O. C.

Tested and Prepared
by



ETS Product Service (Taiwan) Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679

A2LA Accredited No.: 2300.01

PTCRB Accredited Type Certification Test House



Report No.: W6M20708-8430-P-15B

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
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Registration number: W6M20708-8430-P-15B

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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 : May 2007

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 Product Service (Taiwan) 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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1.2 Tester

September 04, 2007 Jay Chaing *Jay Chaing*

Date ETS-Lab. Test Engineer Signature

Technical responsibility for area of testing:

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September 04, 2007 Steven Chuang *Steven Chuang*

Date ETS Name Signature

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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 Product Service (Taiwan) 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 accredited 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 Product Service (Taiwan) Co., Ltd.

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

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1.4 Details of applicant

Name : Magic Control Technology Corporation
Street : 6F, #120-11, Chung Shan Rd, Sec. 3, Chung Ho,
City : 235 Taipei,
Country : Taiwan, R. O. C.
Telephone : +886-2-3234-6616
Fax : +886-2-3234-6606
Teletex : ./.

1.5 Application details

Date of receipt of test item : August 20, 2007
Date of test : from August 21, 2007 to August 31, 2007

1.6 Test item

1.6.1 Description of test item

Type of product : USB 2.0 Graphic Card
Type identification : UVT100
Multi-listing model number : ./.
Brand Name : ./.
Photos : Please find in Appendix.

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1.6.2 Manufacturer (if different from applicant in point 1.4)

Name : ./.
Street : ./.
Town : ./.
Country : ./.
Contact : ./.
Phone : ./.

1.6.3 Frequency behavior

Highest clock Frequency	< 200 MHz
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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 battery:	5 VDC (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	2006/10/16	2007/10/15
ETSTW-CE 002	PREREULATOR MODE DC POWER SUPPLY	None	None		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	2006/10/16	2007/10/15
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2006/10/16	2007/10/15
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	In House Certificate	
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2005/10/24	2007/10/23
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2007/8/2	2008/8/1
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2005/12/8	2007/12/7
ETSTW-CE 014	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T2-02	20241	FCC	2005/12/7	2007/12/6
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2006/11/7	2008/11/6
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2006/11/21	2007/11/20
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	2006/10/20	2007/10/19
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2006/10/30	2007/10/29
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2006/10/12	2007/10/11
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	Log-Periodic Antenna	HL025	352886/001	R&S	2006/5/4	2008/5/3
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2004/11/8	2007/11/7
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2006/10/11	2007/10/10
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	EMCO	In House Certificate	
ETSTW-RE 028	Log-Periodic Dipole Array 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 Guide Horn Antenna	3117	00035224	EMCO	2006/5/3	2008/5/2
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2006/10/11	2007/10/10
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2005/10/17	2007/10/16
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2007/1/11	2009/1/10
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2006/5/8	2008/5/7
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2006/5/29	2008/5/28

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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	2007/5/2	2009/5/1
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26	200074	R&S	2007/7/16	2008/7/15
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2007/7/2	2009/7/1

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2.4 Test results

1st test
 test after modification
 production test

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

Note: According to FCC part 15.109 (g), 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".

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2.4.1 Radiated Emission

2.4.1.1 Test Equipment

a) Biconical Antenna (HK116)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 042

b) Log-Periodic Dipole Antenna (HL223)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 043

c) EMI TEST RECEIVER (ESI-26)

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

d) EMI TEST RECEIVER (ESI 40)

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

e) Log-Periodic Antenna (HL025)

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

f) Log-Periodic DipoleArray Antenna (3148)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 028

g) Biconical Antenna (3109)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 029

h) Double-Ridged Waveguide Horn Antenna (3117)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 030

i) Log-Periodic Antenna (HL050)

For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-RE 044

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.

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2.4.2 Conducted Emission

2.4.2.1 Test Equipment

- a) ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK (ESH3-Z5)
For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-CE 004
- b) IMPULS-BEGRENZER PULSE LIMITER (ESH3-Z2)
For your reference please find it in our test equipment list at page 9 to 10 as number : ETSTW-CE 006
- c) EMI 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) 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

- 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

Model: UVT100 Date: 2007/8/28
 Mode: Temperature: 26 °C Engineer: Evan
 Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBUV)	Detector	Factor (dB)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
164.128	13.09	QP	15.26	28.35	30	-1.65	110	340
204.770	13.19	QP	12.23	25.42	30	-4.58	120	335
287.174	20.51	QP	14.98	35.49	37	-1.51	50	310
410.160	13.68	QP	18.00	31.68	37	-5.32	330	244
656.313	7.88	QP	22.82	30.7	37	-6.3	90	250
779.178	10.18	QP	24.82	35	37	-2	120	229

Polarization: Vertical

Frequency (MHz)	Reading (dBUV)	Detector	Factor (dB)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
164.188	8.84	peak	15.25	24.09	30	-5.91	120	120
246.433	14.77	peak	13.73	28.5	37	-8.5	90	155
287.555	15.67	peak	14.99	30.66	37	-6.34	320	190
532.866	12.79	peak	20.36	33.15	37	-3.85	120	285
716.633	8.98	peak	23.89	32.87	37	-4.13	90	299
913.026	5.72	peak	26.54	32.26	37	-4.74	0	310

- Note**
1. Correction Factor = Antenna factor + Cable loss - Preamplifier
 2. The formula of measured value as: Test Result = Reading + Correction Factor
 3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
 4. All not in the table noted test results are more than 20 dB below the relevant limits.
 5. See attached diagrams as appendix.

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2.5.2 Conducted Emission

Conducted Emission Emission

Model: UVT100 Date: 2007/8/21
 Mode: Temperature: 26 °C Engineer: Catey
 Polarization: N Humidity: 60 %

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.201	41.17	35.06	10.10	51.27	45.16	63.57	53.57	-8.41
0.2659	33.49	27.71	10.10	43.59	37.81	61.25	51.25	-13.44
0.333	32.77	29.67	10.10	42.87	39.77	59.38	49.38	-9.61
1.805	25.73	23.37	10.10	35.83	33.47	56	46	-12.53
5.1944	10.55	-5.76	10.10	20.65	4.34	60	50	-39.35
19.7719	13.62	-0.73	10.10	23.72	9.37	60	50	-36.28

Polarization: L1

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
0.2004	43.3	36.33	10.10	53.4	46.43	63.59	53.59	-7.16
0.267	35.22	29.09	10.10	45.32	39.19	61.21	51.21	-12.02
0.336	33.92	30.21	10.10	44.02	40.31	59.3	49.3	-8.99
0.4026	31.07	26.43	10.10	41.17	36.53	57.8	47.8	-11.27
1.4003	26.72	22.48	10.10	36.82	32.58	56	46	-13.42
5.4747	24.38	21.53	10.10	34.48	31.63	60	50	-18.37

- Note**
1. The formula of measured value as: **Test Result = Reading + Correction Factor**
 2. The **Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss**
 3. Detector function in the form : **PK = Peak, QP = Quasi Peak, AV = Average**
 4. All not in the table noted test results are more than 20 dB below the relevant limits.
 5. See attached diagrams as appendix.

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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 Devices

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

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Appendix

A Measurement diagrams

1. Radiated Emission

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

2. Conducted Emission

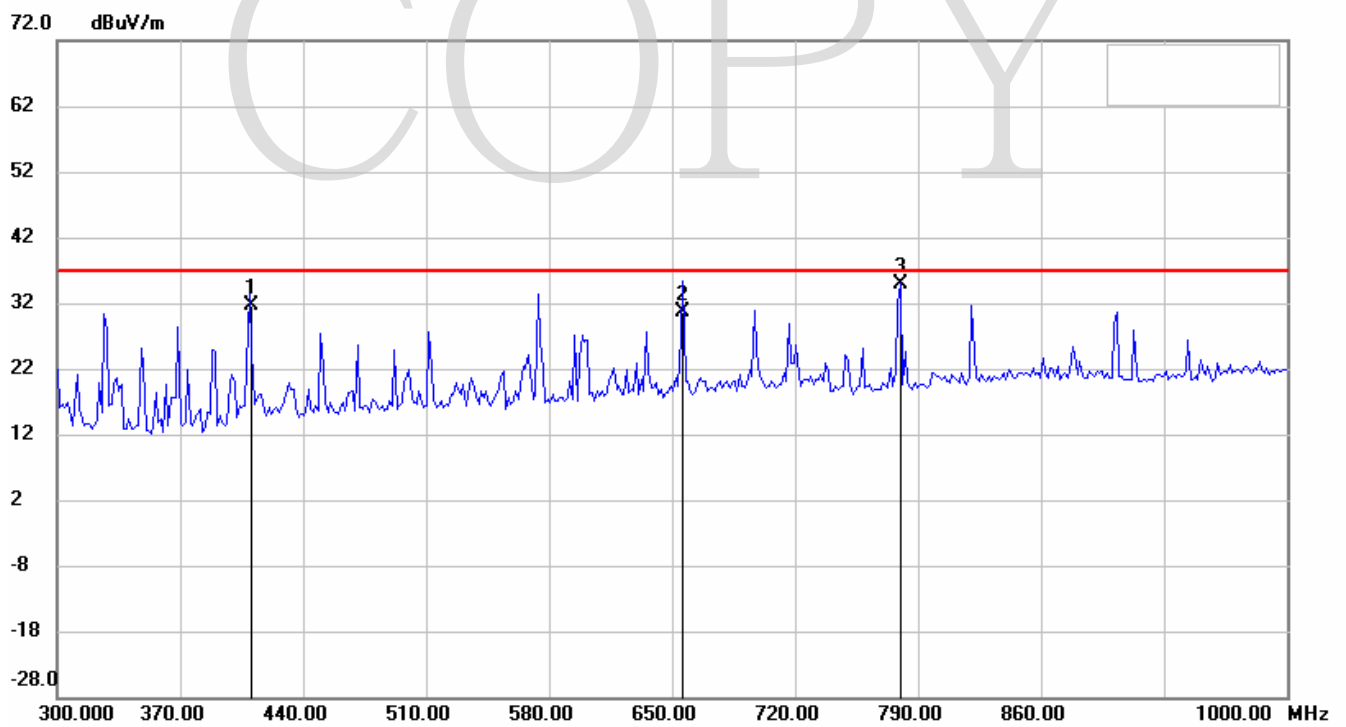
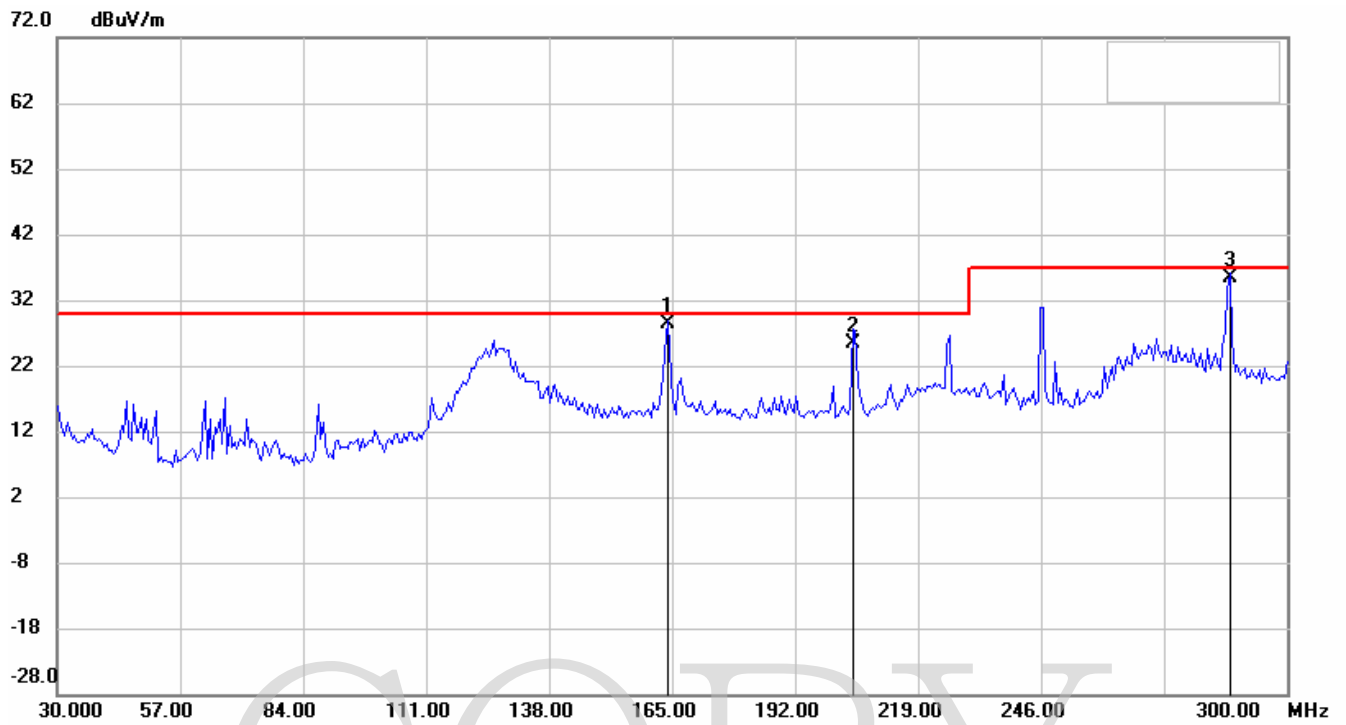
(The measurement diagrams plots attached below are preliminary wideband scan with a peak and average detector for reference only. The final test results are listed on section 2.5.2)

B Photos

1. External Photos
2. Internal Photos
3. Set Up Photo of Radiated Emission
4. Set Up Photo of Conducted Emission

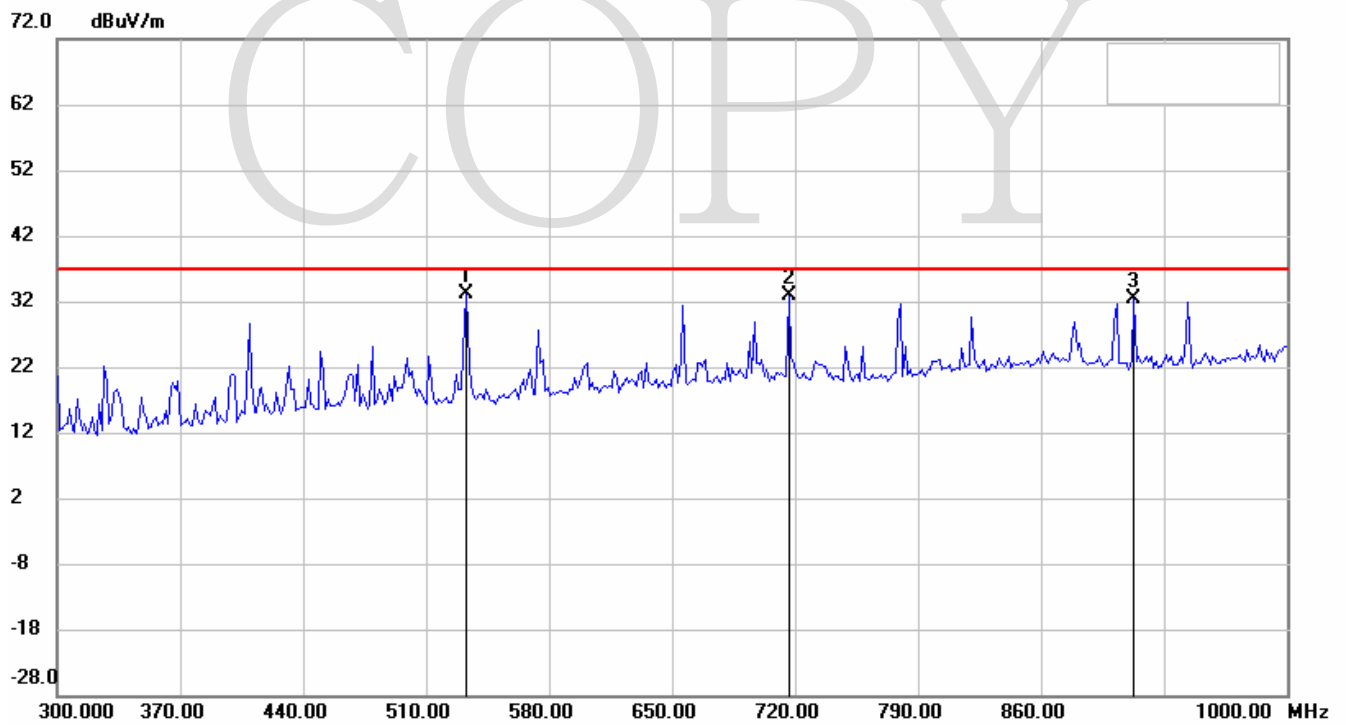
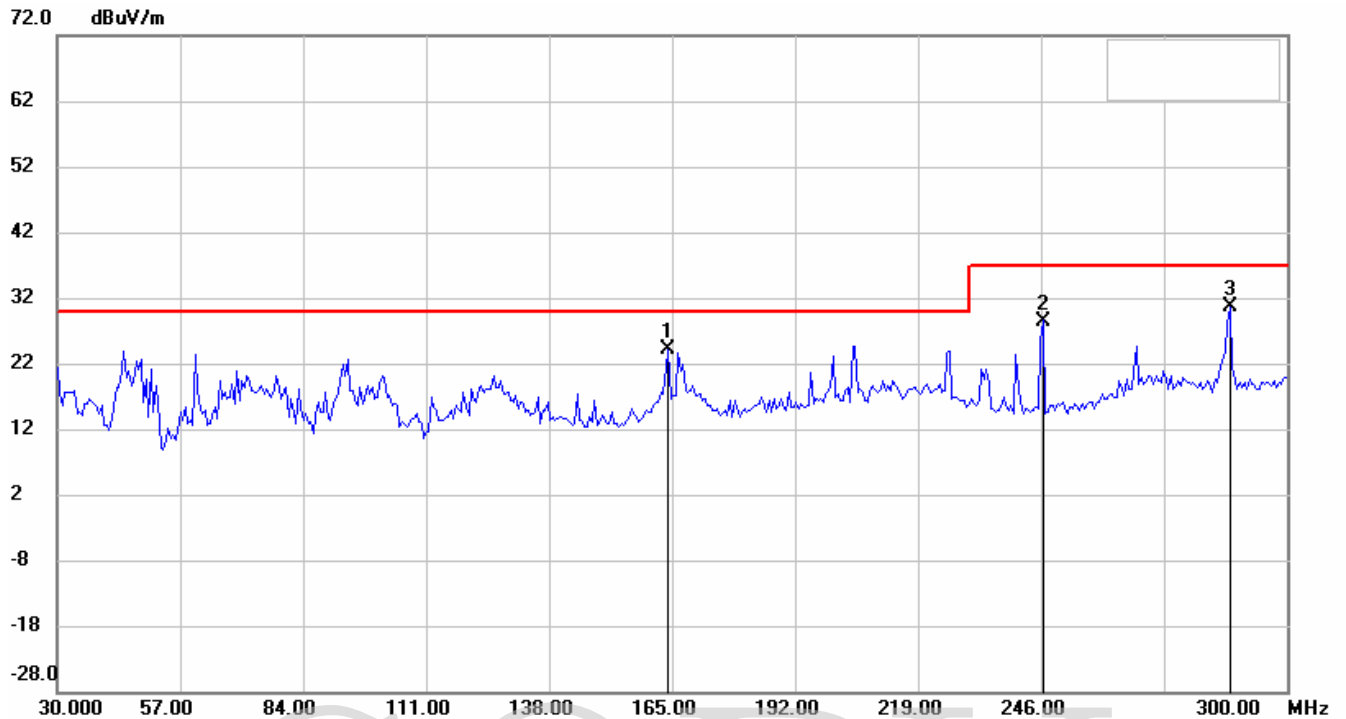
Registration number: W6M20708-8430-P-15B

Radiated Emission Antenna Polarization H



Registration number: W6M20708-8430-P-15B

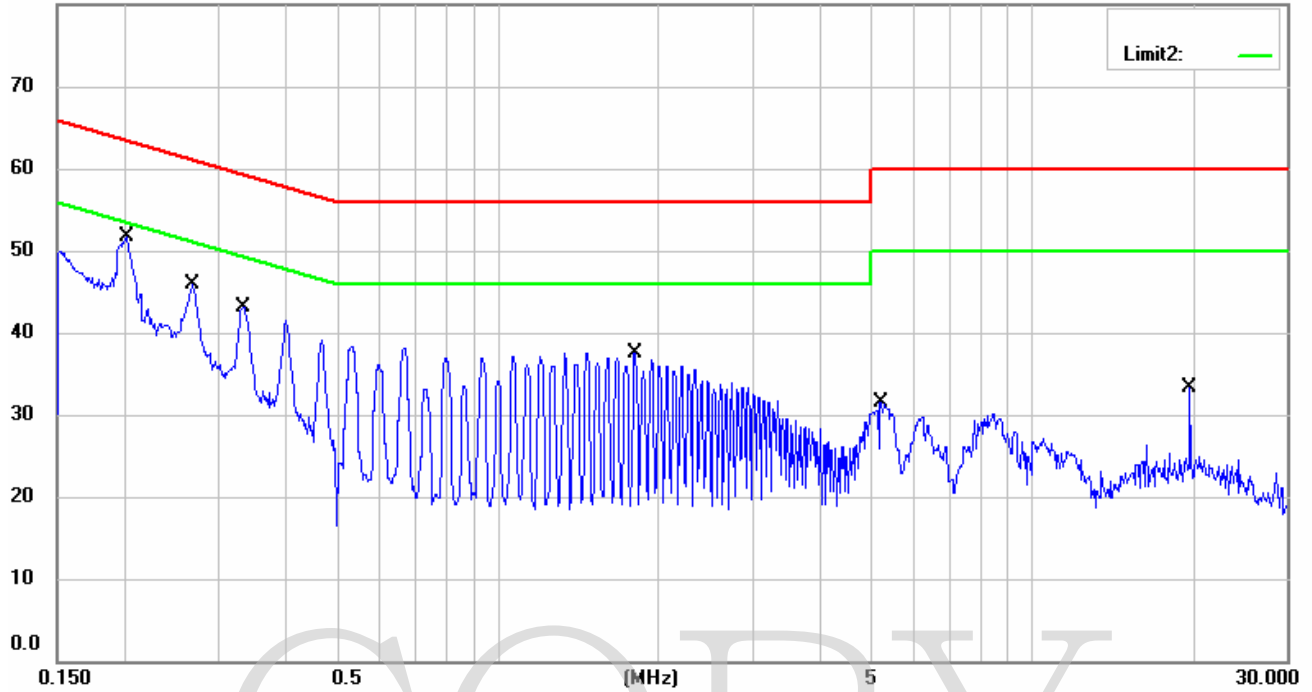
Antenna Polarization V



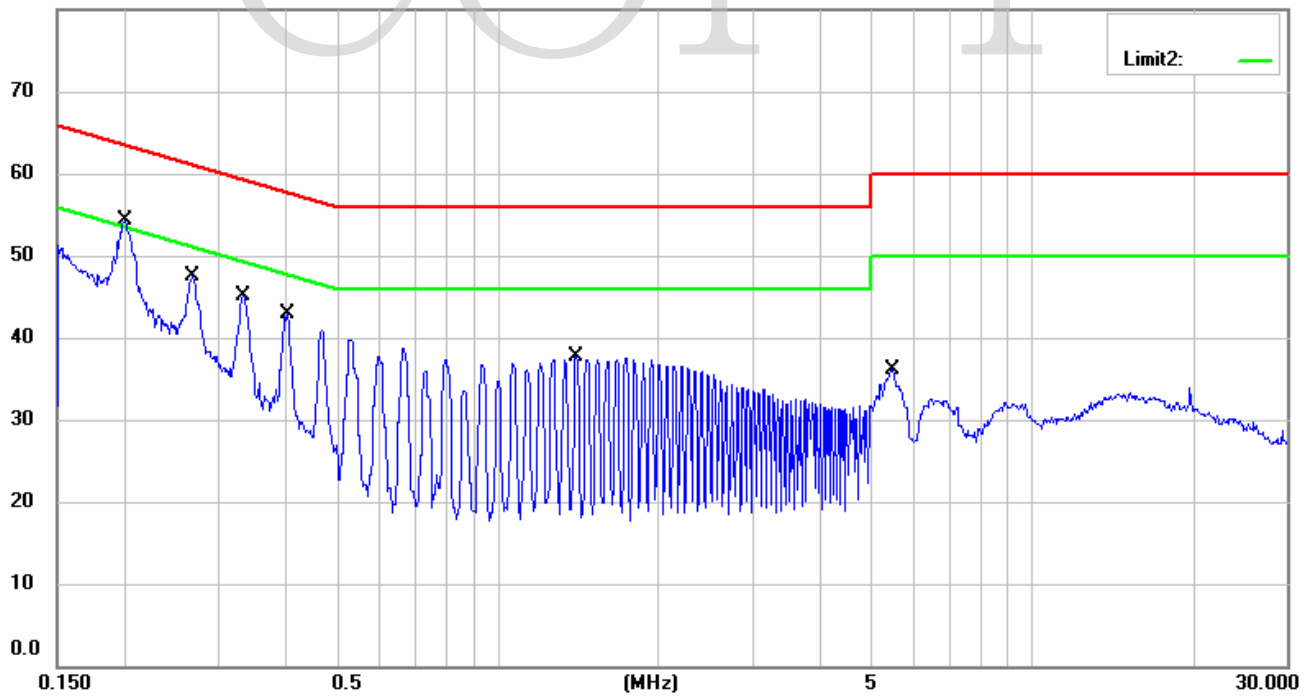
Registration number: W6M20708-8430-P-15B

Conducted Emission

LISN N
80.0 dBuV



LISN L1
80.0 dBuV



Registration number: W6M20708-8430-P-15B

External Photos



Registration number: W6M20708-8430-P-15B



Registration number: W6M20708-8430-P-15B

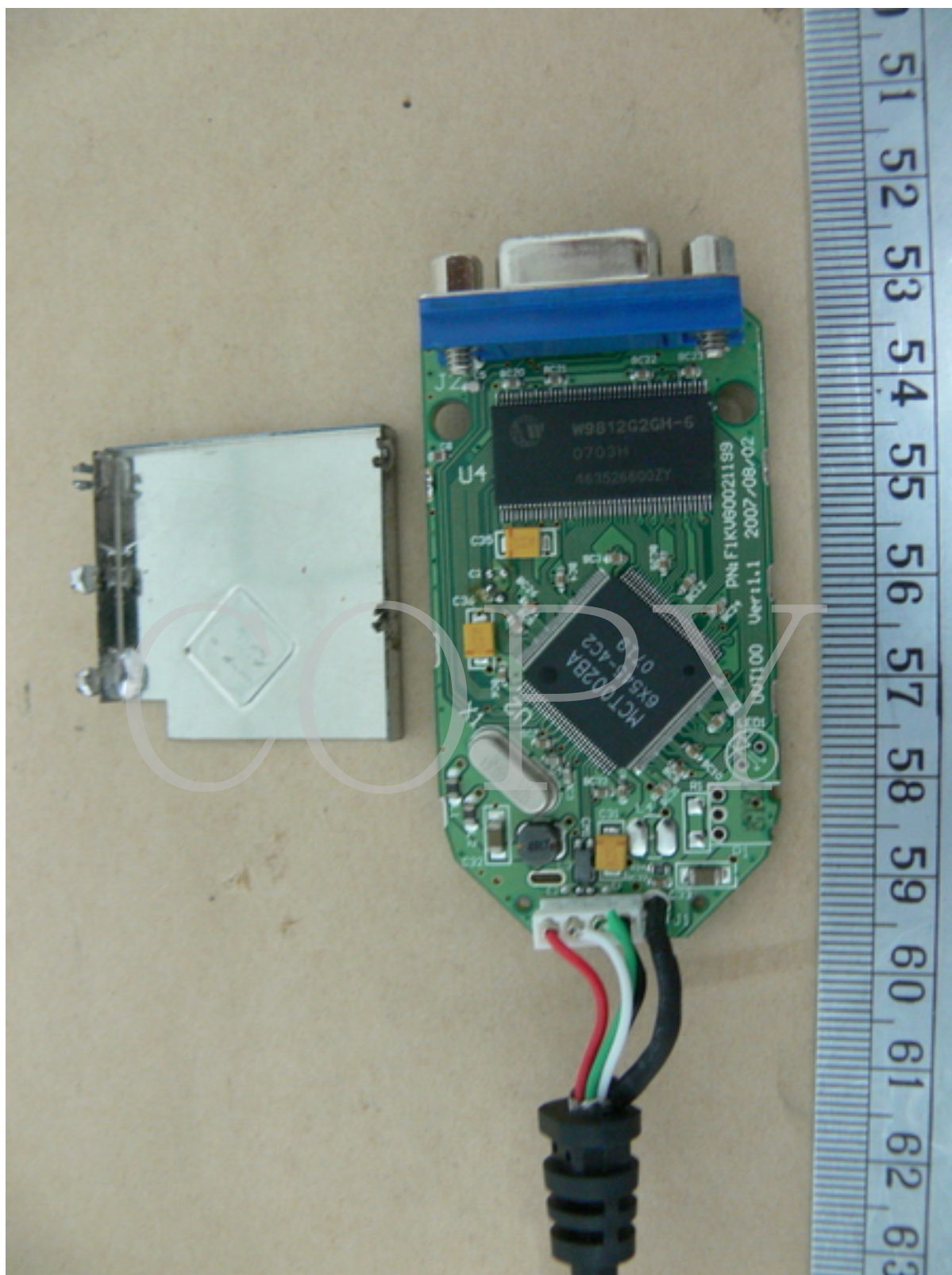


Registration number: W6M20708-8430-P-15B

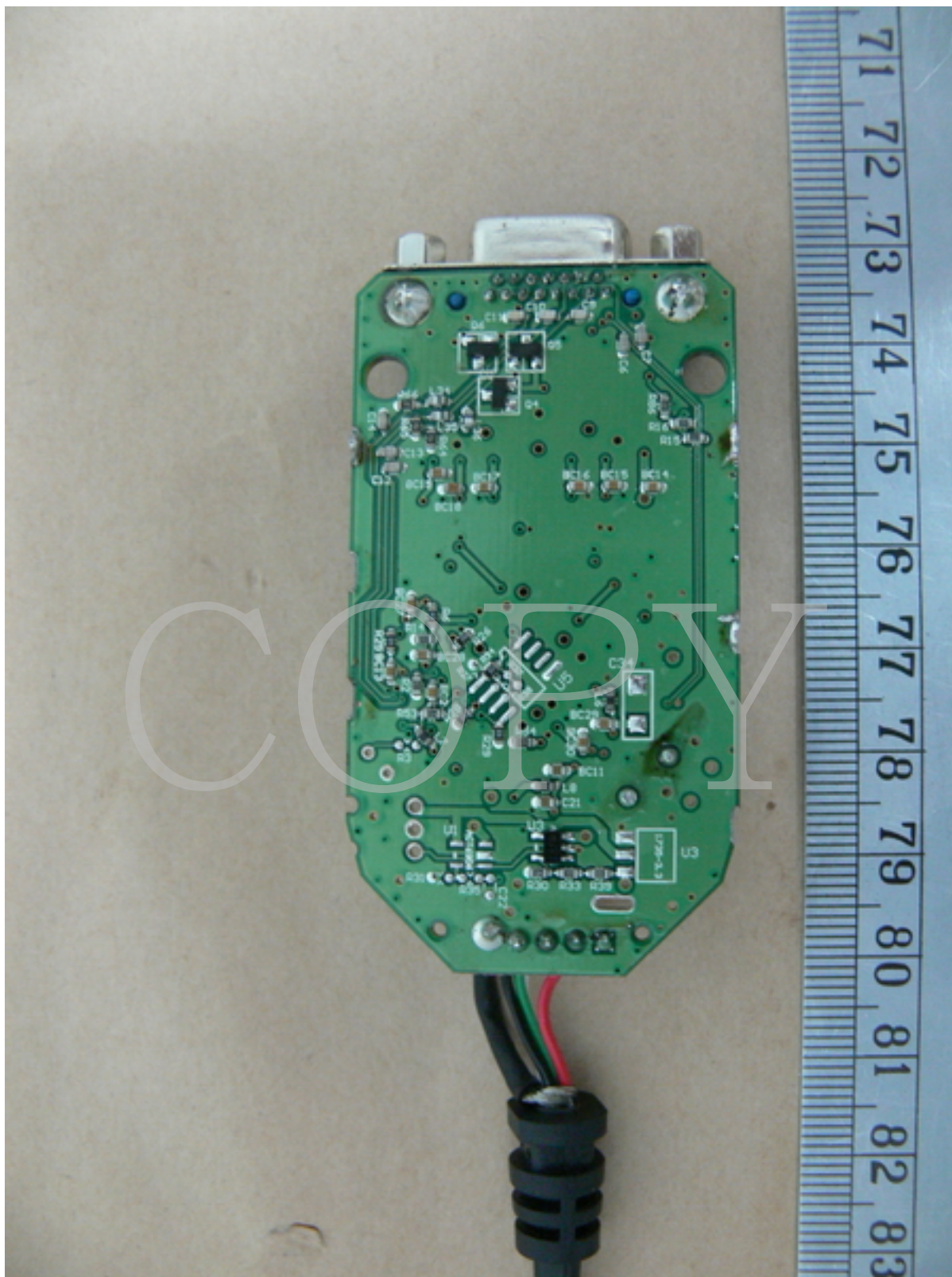
Internal Photos



Registration number: W6M20708-8430-P-15B



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Set Up Photo of Radiated Emission



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Set Up Photo of Conducted Emission

