



SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION Co., Ltd.

## Declaration of Conformity

**Certification number: CTE07080006**

**Issue date: Aug 20, 2007**

In accordance with the following Applicable Directives:

**2004/108/EC**

**Electromagnetic Compatibility**

The equipment, as described herewith, was tested pursuant to applicable test procedure and complies with the requirements of:

**ETSI EN 300 386 V1.3.3: 2006**

The test results are traceable to the international or national standards.

**Applicant:** SHENZHEN TENDA TECHNOLOGY CO., LTD  
3F, Moso Technology Park, xili Town, Nanshan District, Shenzhen  
518108, China

**Manufacturer:** SHENZHEN TENDA TECHNOLOGY CO., LTD  
3F, Moso Technology Park, xili Town, Nanshan District, Shenzhen  
518108, China

Equipment under test: **Gigabit Ethernet Switch**

**Model/Type reference:** TEG1224T

**Listed Model:** TEG1024S

**Laboratory Name:** Shenzhen Huatongwei International Inspection Co., Ltd  
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China  
Tel: 86-755-26748058 Fax: 86-755-26748005  
Http: //www.szhtw.com.cn E-mail: master@szhtw.com.cn

**Note:**

The certification is only valid for the equipment and configuration described, in conjunction with the test data detailed above.

The CE mark as shown beside can be used, under the responsibility of the manufacturer, after completion of an EC Directive of Conformity and compliance with all relevant EC Directive.



For and on behalf of  
Shenzhen Huatongwei International Inspection Co., Ltd.

**Authorized by:**

  
Authorized Signature(s)





检测  
CNASL1225

partner

### TEST REPORT

ETSI EN 300 386 V1.3.3:

**Electromagnetic compatibility and Radio spectrum Matters (ERM);  
Telecommunication network equipment; ElectroMagnetic Compatibility (EMC)  
Requirements**

Report Reference No.....: TRE07080006

Compiled by

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*Mellen Lee*

Supervised by

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*Byron Lai*

Approved by

( position+printed name+signature)..: Manager Jimmy Li

*Jimmy Li*

Date of issue.....: Aug 20, 2007

Testing Laboratory Name.....: Shenzhen Huatongwei International Inspection Co., Ltd

Address.....: Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China

Testing location/ procedure.....: Full application of Harmonised standards   
Partial application of Harmonised standards   
Other standard testing methods

Applicant's name.....: SHENZHEN TENDA TECHNOLOGY CO., LTD

Address.....: 3F, Moso Technology Park, xili Town, Nanshan District, Shenzhen 518108, China

**Test specification:**

Standard.....: ETSI EN 300 386 V1.3.3: 2006

Test Report Form No.....: HTWEMCCE\_1A

TRF Originator.....: Shenzhen Huatongwei International Inspection CO., Ltd

Master TRF.....: Dated 2006-06

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Test item description.....: Gigabit Ethernet Switch

Manufacturer.....: SHENZHEN TENDA TECHNOLOGY CO., LTD

Model/Type reference.....: TEG1224T

Listed Models.....: TEG1024S

Ratings.....: DC5V      6A      30W      Load: 20.5W

Result.....: **Positive**

**EMC -- TEST REPORT**

<b>Test Report No. :</b>	<b>TRE07080006</b>	Aug 08, 2007
		Date of issue

Equipment under Test : Gigabit Ethernet Switch

Model / Type : TEG1224T

Listed Models : TEG1024S

**Applicant** : SHENZHEN TENDA TECHNOLOGY CO., LTD

Address : 3F, Moso Technology Park, xili Town, Nanshan District,  
Shenzhen 518108, China

**Manufacturer** : SHENZHEN TENDA TECHNOLOGY CO., LTD

Address : 3F, Moso Technology Park, xili Town, Nanshan District,  
Shenzhen 518108, China

<b>Test Result</b> according to the standards on page 4:	<b>Positive</b>
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The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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## 1. TEST STANDARDS

The tests were performed according to following standards:

[ETSI EN 300 386 V1.3.3: 2006](#) Electromagnetic compatibility and Radio spectrum Matters (ERM);  
Telecommunication network equipment; ElectroMagnetic Compatibility (EMC) Requirements

## 2. SUMMARY

### 2.1. General Remarks

Date of receipt of test sample : Aug 09, 2007

Testing commenced on : Aug 09, 2007

Testing concluded on : Aug 20, 2007

### 2.2. Equipment Under Test

#### Power supply system utilised

Power supply voltage :  230V / 50 Hz                       115V / 60Hz  
 12 V DC     24 V DC  
 Other (specified in blank below)

/

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### 2.3. Short description of the Equipment under Test (EUT)

The EUT is Gigabit Ethernet Switch.

Serial number: Prototype

### 2.4. EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

Test program (customer specific)

Emissions tests.....: According to ETSI EN 300 386 V1.3.3, searching for the highest disturbance.

Immunity tests .....: According to ETSI EN 300 386 V1.3.3, searching for the highest susceptibility.

Harmonic current..... : According to ETSI EN 300 386 V1.3.3, searching for the highest disturbance.

Voltage fluctuation..... : According to ETSI EN 300 386 V1.3.3, searching for the highest disturbance.

---

## 2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- - supplied by the manufacturer
- o - supplied by the lab
- Power Cord for EUT
  - Length (m) : 1.2
  - Shield : Unshielded
  - Detachable : Detachable
- o Computer
  - Manufacture : DELL

## 2.6. Performance level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test relative to a performance criteria defined by its manufacturer or the requestor of the test, or agreed between the manufacturer and the purchaser of the product. Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

- essential operational modes and states;
- tests of all peripheral access(hard disks, floppy disks, printers, keyboard, mouse, etc.);
- quality of software execution
- quality of data display and transmission
- quality of speech transmission

**Definition related to the performance level:**

- based on the used product standard
- o based on the declaration of the manufacturer, requestor or purchaser

### **Criterion A:**

The apparatus shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

### **Criterion B:**

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

### **Criterion C:**

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

### **3. TEST ENVIRONMENT**

#### **3.1. Address of the test laboratory**

Shenzhen Huatongwei International Inspection Co., Ltd  
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China  
Phone: 86-755-26715686 Fax: 86-755-26748089

#### **3.2. Test Facility**

The test facility is recognized, certified, or accredited by the following organizations:

##### **CNAS-Lab Code: L1225**

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 1999 General Requirements) for the Competence of Testing and Calibration Laboratories.

##### **A2LA-Lab Cert. No. 2243.01**

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 1999 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is from Aug 24, 2005 to Sept 30, 2007

##### **FCC-Registration No.: 662850**

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date September 12, 2006.

##### **IC-Registration No.: 5377**

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377 on November 28<sup>th</sup>, 2005.

##### **ACA**

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

##### **NEMKO-Aut. No.: ELA125**

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

##### **VCCI**

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2484. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

##### **IECEE CB**

Shenzhen Huatongwei International Inspection Co Ltd has been assessed and determined to fully comply with the requirements of ISO/IEC 17025: 2005-05, The Basic Rules, IECEE 01: 2006-10 and Rules of Procedure IECEE 02: 2006-10, and the relevant IECEE CB-Scheme Operational Documents.

It is therefore entitled to operate as a CB Testing Laboratory under the responsibility of Nemko A/S. This certificate remains valid until May 25th 2009 at which time it will be reissued by the IECEE Executive Secretary upon successful completion of the normally scheduled 3-year Reassessment Program administered by the IECEE CB Scheme.

## DNV

Shenzhen Huatongwei International Inspection Co Ltd has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025(2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until 09 July, 2010.

### 3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 950-1050mbar

### 3.4. Test Description

Emission Measurement		
Radiated Emission	ETSI EN 300 386 V1.3.3: 2006 EN 55022: 1998+A1: 2006	PASS
Conducted Disturbance	ETSI EN 300 386 V1.3.3: 2006 EN 55022: 1998+A1: 2006	PASS
Harmonic Current	ETSI EN 300 386 V1.3.3: 2006 EN 61000-3-2: 2006	PASS
Voltage Fluctuation and Flicker	ETSI EN 300 386 V1.3.3: 2006 EN 61000-3-3: 1995+A1: 2001+A2: 2005	PASS
Immunity Measurement		
Electrostatic Discharge	ETSI EN 300 386 V1.3.3: 2006 EN 61000-4-2: 2001	PASS
RF Field Strength Susceptibility	ETSI EN 300 386 V1.3.3: 2006 EN 61000-4-3: 2006	PASS
Electrical Fast Transient/Burst Test	ETSI EN 300 386 V1.3.3: 2006 EN 61000-4-4: 2004	PASS
Surge Test	ETSI EN 300 386 V1.3.3: 2006 EN 61000-4-5: 2005	PASS
Conducted Susceptibility Test	ETSI EN 300 386 V1.3.3: 2006 EN 61000-4-6: 2006	PASS
Voltage Dips and Interruptions Test	ETSI EN 300 386 V1.3.3: 2006 EN 61000-4-11: 2004	PASS

The measurement uncertainty is not included in the test result.

### 3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.22dB	(1)
Conducted Disturbance	0.15~30MHz	3.29dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 3.6. Equipments Used during the Test

Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA-BROADBAND ANTENNA	ROHDE & SCHWARZ	HL562	100015	2006/10
2	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2006/10
3	RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	2006/10
4	TURNTABLE	ETS	2088	2149	2006/10
5	ANTENNA MAST	ETS	2075	2346	2006/10
6	EMI TEST SOFTWARE	ROHDE & SCHWARZ	ESK1	N/A	2006/10

Conducted Disturbance					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100038	2006/10
2	Artificial Mains	ROHDE & SCHWARZ	ESH2-Z5	100028	2006/10
3	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100044	2006/10
4	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2006/10

Harmonic Current					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Purified Power Source	CALIFORNIA INSTRUMENTS	HFS500	54513	2006/10
2	Harmonic And Flicker Analyzer	EM TEST	DPA503S1	0500-10	2006/10

Voltage Fluctuation and Flicker					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Purified Power Source	CALIFORNIA INSTRUMENTS	HFS500	54513	2006/10
2	Harmonic And Flicker Analyzer	EM TEST	DPA503S1	0500-10	2006/10

Electrostatic Discharge					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ESD Simulator	EM TEST	DITOC0103Z	0301-04	2006/10

RF Field Strength Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	SIGNAL GENERATOR	IFR	2032	203002/100	2006/10
2	AMPLIFIER	AR	150W1000	301584	2006/10
3	DUAL DIRECTIONAL COUPLER	AR	DC6080	301508	2006/10
4	POWER HEAD	AR	PH2000	301193	2006/10
5	POWER METER	AR	PM2002	302799	2006/10

Electrical Fast Transient/Burst					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Ultra Compact Simulator	EM TEST	UCS500M6	0500-19	2006/10
2	Coupling Clamp	EM TEST	HFK	1501-14	2006/10

Surge					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA COMPACT SIMULATOR	EM TEST	UCS500M6	0500-19	2006/10

Conducted Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Signal Generator	IFR	2023A	202304/060	2006/10
2	Amplifier	AR	75A250	302205	2006/10
3	Dual Directional Coupler	AR	DC2600	302389	2006/10
4	6db Attenuator	EMTEST	ATT6/75	0010230A	2006/10
5	EM CLAMP	LÜTHI	EM101	335625	2006/10
6	CDN	EMTEST	CDN M3	0802-03	2006/10

Voltage Dips and Interruptions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Ultra Compact Simulator	EM TEST	UCS500M6	0500-19	2006/10
2	Motor Driven Voltage Transformer	EM TEST	MV2616	0301-11	2006/10

## 4. TEST CONDITIONS AND RESULTS

### 4.1. Radiated Emission

For test instruments and accessories used see section 3.6.

#### 4.1.1. Description of the test location

Test location: Shielded room No. 4

#### 4.1.2. Limits of disturbance(Class B)

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB $\mu$ V/m)
30 ~ 230	3	40
230 ~ 1000	3	47

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

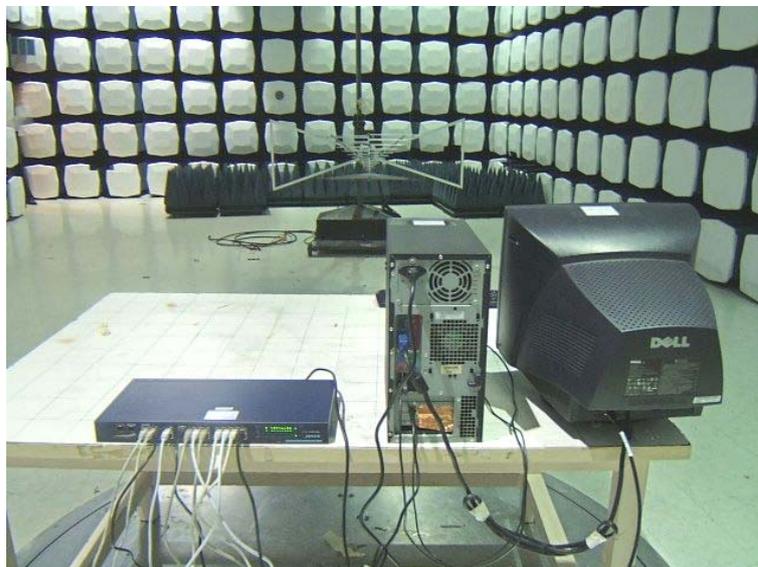
(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

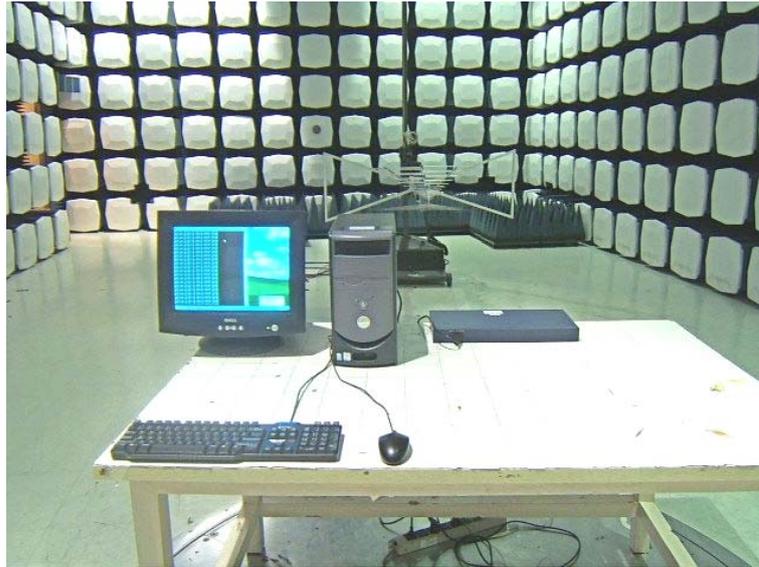
#### 4.1.3. Description of the test set-up

##### 4.1.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum emanation are recorded.

##### 4.1.3.2. Photos of the test set-up





#### 4.1.4. Test result

The requirements are **Fulfilled**

Band Width: 120KHz

Frequency Range: 30MHz to 1000MHz

**Remarks:** The limits are kept. For detailed results, please see the following page(s).

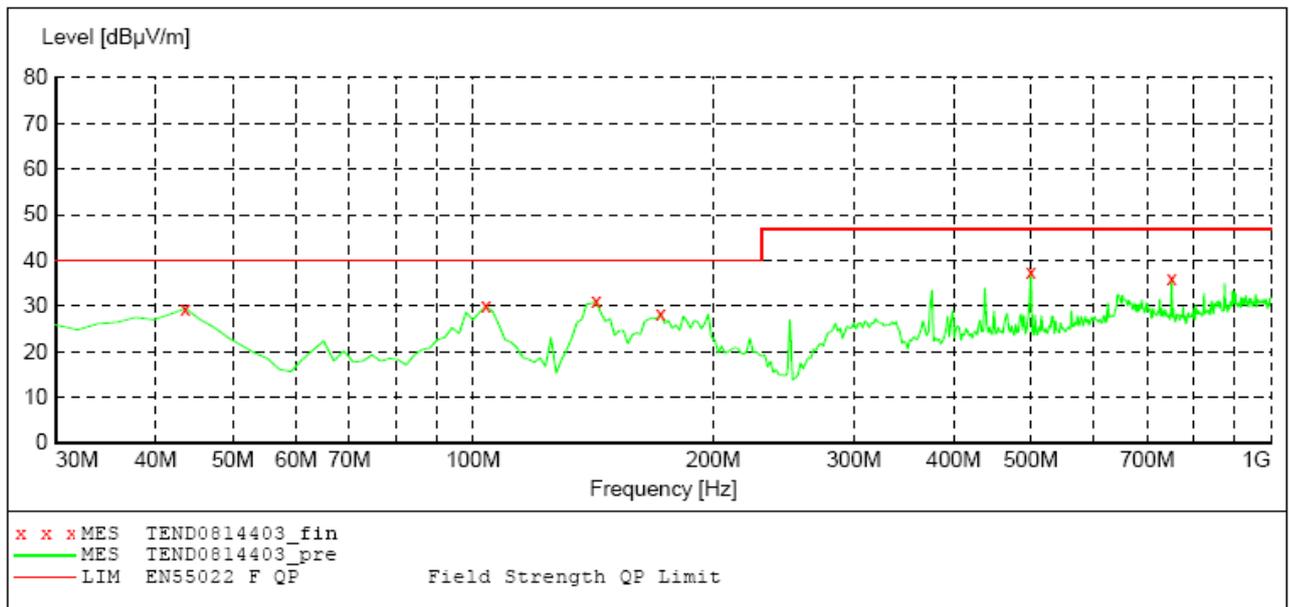
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION EN55022 CLASS B**

EUT: Gigabit Ethernet Switch M/N:TEG1224T  
 Manufacturer: SHENZHEN TENDA TECHNOLOGY CO.,LTD  
 Operating Condition: Running  
 Test Site: 3M CHAMBER  
 Operator: JACKY  
 Test Specification: AC 230V/50Hz  
 Comment:  
 Start of Test: 8/14/07 / 12:46:41PM

**SCAN TABLE: "test (30M-1G)"**

Short Description:			Field Strength			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 07



**MEASUREMENT RESULT: "TEND0814403\_fin"**

8/14/07 12:58PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
43.607214	29.50	13.6	40.0	10.5	QP	100.0	241.00	VERTICAL
103.867735	30.00	14.4	40.0	10.0	QP	100.0	57.00	VERTICAL
142.745491	31.00	11.2	40.0	9.0	QP	100.0	80.00	VERTICAL
171.903808	28.30	11.1	40.0	11.7	QP	100.0	80.00	VERTICAL
500.420842	37.50	20.1	47.0	9.5	QP	100.0	216.00	VERTICAL
751.182365	35.90	23.9	47.0	11.1	QP	100.0	241.00	VERTICAL

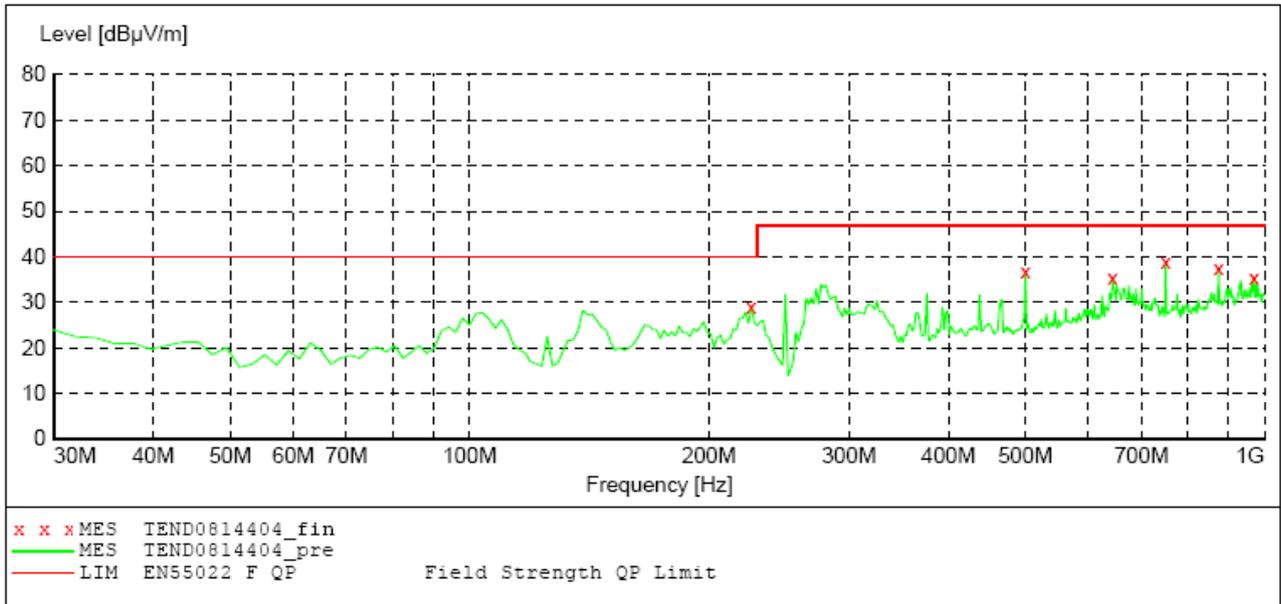
**SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD**

**RADIATED EMISSION EN55022 CLASS B**

EUT: Gigabit Ethernet Switch M/N:TEG1224T  
 Manufacturer: SHENZHEN TENDA TECHNOLOGY CO.,LTD  
 Operating Condition: Running  
 Test Site: 3M CHAMBER  
 Operator: JACKY  
 Test Specification: AC 230V/50Hz  
 Comment:  
 Start of Test: 8/14/07 / 12:59:11PM

**SCAN TABLE: "test (30M-1G)"**

Short Description:			Field Strength			
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	60.0 kHz	QuasiPeak	1.0 s	120 kHz	HL562 07



**MEASUREMENT RESULT: "TEND0814404\_fin"**

8/14/07 13:12PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
226.332665	29.10	11.5	40.0	10.9	QP	100.0	220.00	HORIZONTAL
500.420842	36.60	20.1	47.0	10.4	QP	100.0	242.00	HORIZONTAL
644.268537	35.30	23.4	47.0	11.7	QP	250.0	220.00	HORIZONTAL
751.182365	38.90	23.9	47.0	8.1	QP	100.0	220.00	HORIZONTAL
875.591182	37.30	25.0	47.0	9.7	QP	300.0	196.00	HORIZONTAL
970.841683	35.50	25.6	47.0	11.5	QP	100.0	196.00	HORIZONTAL

## 4.2. Conducted disturbance

For test instruments and accessories used see section 3.6.

### 4.2.1. Description of the test location

Test location: Shielded room No. 3

### 4.2.2. Limits of disturbance

Limit of conducted disturbance at the mains ports(Class B)

Frequency Range (MHz)	Limits (dBuV)	
	Quasi-Peak	Average
0.150~0.500	66~56	56~46
0.500~5.000	56	46
5.000~30.00	60	50

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

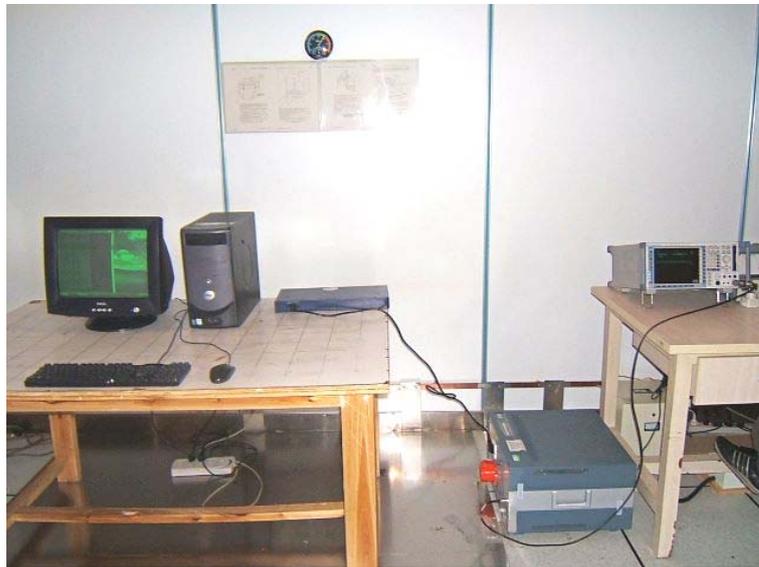
### 4.2.3. Description of the test set-up

#### 4.2.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum emanation are recorded.

#### 4.2.3.2. Photo of the test set-up

at Mains Ports:





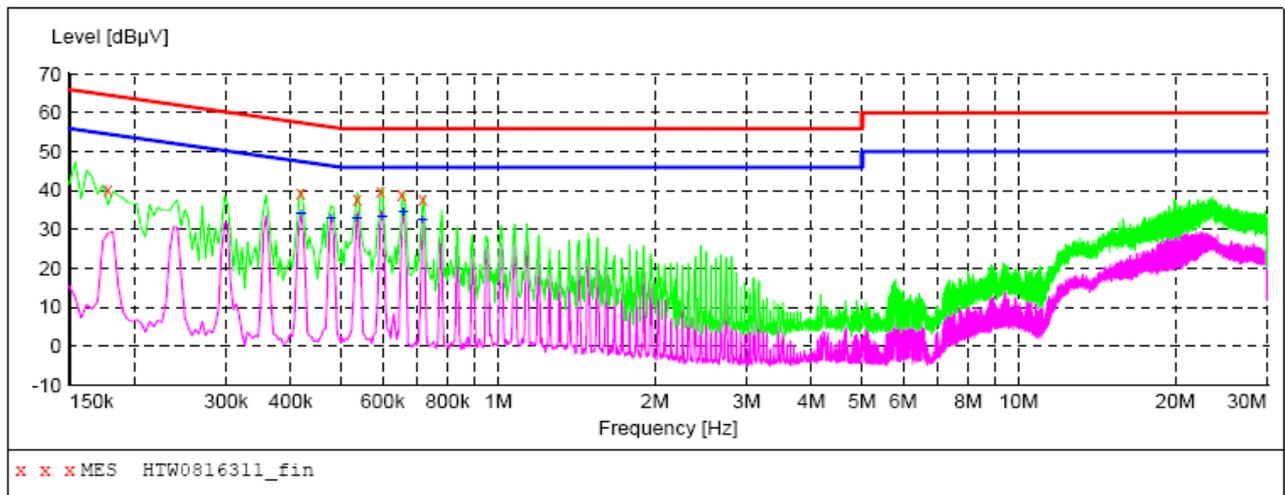
**Shenzhen Huatongwei International Inspection CO.,Ltd**

**Voltage Mains Test EN55022 CLASS B**

EUT: Gigabit Ethernet Switch M/N:TEG1224T  
 Manufacturer: SHENZHEN TENDA TECHNOLOGY CO.,LTD  
 Operating Condition: Running  
 Test Site: 3# SHIELDED ROOM  
 Operator: SAM  
 Test Specification: AC 230V/50Hz  
 Comment:  
 Start of Test: 8/16/2007 / 9:44:16AM

**SCAN TABLE: "Voltage (9K-30M)FIN"**

Short Description: 150K-30M Voltage



**MEASUREMENT RESULT: "HTW0816311\_fin"**

8/16/2007 9:46AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.178000	40.30	10.0	65	24.3	QP	N	GND
0.418000	39.50	10.1	58	18.0	QP	N	GND
0.536000	37.70	10.1	56	18.3	QP	N	GND
0.594500	39.60	10.1	56	16.4	QP	N	GND
0.653000	38.80	10.1	56	17.2	QP	N	GND
0.716000	37.90	10.1	56	18.1	QP	N	GND

**MEASUREMENT RESULT: "HTW0816311\_fin2"**

8/16/2007 9:46AM

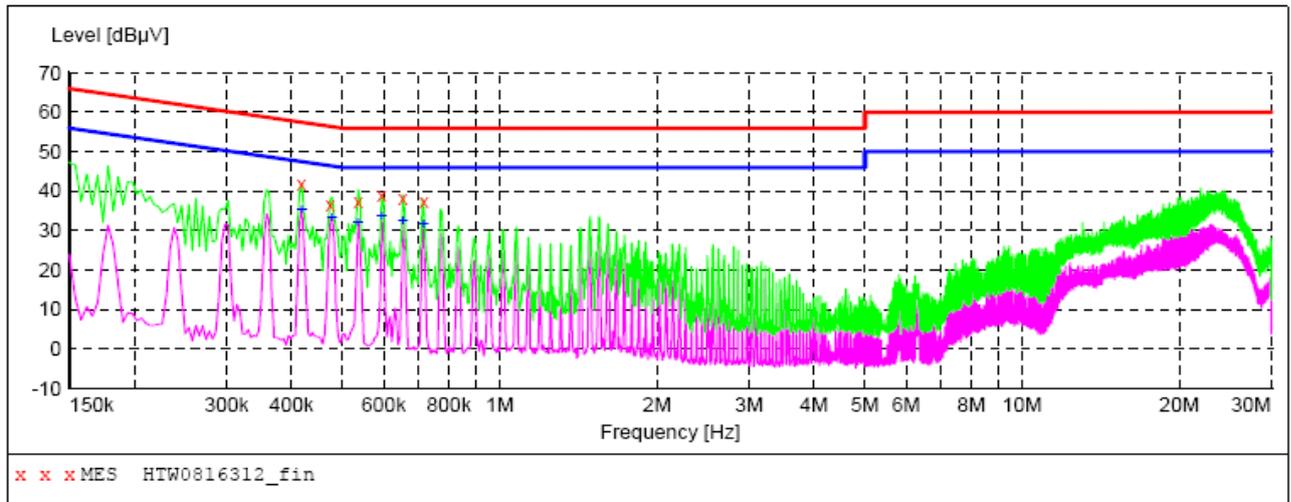
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.418000	33.90	10.1	48	13.6	AV	N	GND
0.478000	32.70	10.1	46	13.7	AV	N	GND
0.536000	33.00	10.1	46	13.0	AV	N	GND
0.599000	33.50	10.1	46	12.5	AV	N	GND
0.657500	34.30	10.1	46	11.7	AV	N	GND
0.716000	32.60	10.1	46	13.4	AV	N	GND

Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test EN55022 CLASS B

EUT: Gigabit Ethernet Switch M/N:TEG1224T
Manufacturer: SHENZHEN TENDA TECHNOLOGY CO.,LTD
Operating Condition: Running
Test Site: 3# SHIELDED ROOM
Operator: SAM
Test Specification: AC 230V/50Hz
Comment:
Start of Test: 8/16/2007 / 9:47:20AM

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "HTW0816312\_fin"

8/16/2007 9:49AM

Table with 8 columns: Frequency MHz, Level dBµV, Transd dB, Limit dBµV, Margin dB, Detector, Line, PE. It contains 6 rows of measurement data points.

MEASUREMENT RESULT: "HTW0816312\_fin2"

8/16/2007 9:49AM

Table with 8 columns: Frequency MHz, Level dBµV, Transd dB, Limit dBµV, Margin dB, Detector, Line, PE. It contains 6 rows of measurement data points.

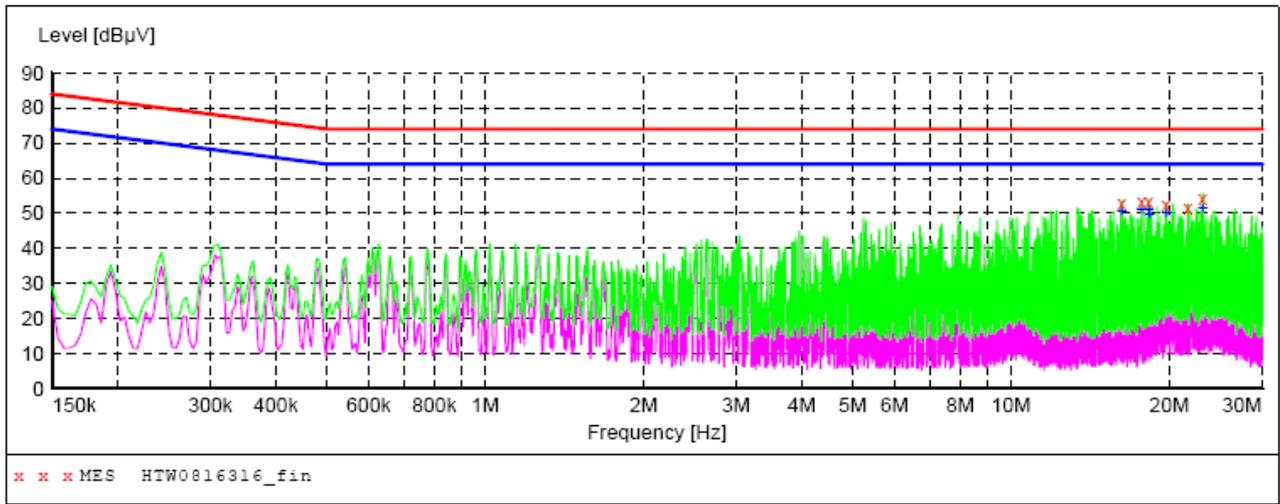
Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test EN55022 CLASS B T

EUT: Gigabit Ethernet Switch M/N:TEG1224T
Manufacturer: SHENZHEN TENDA TECHNOLOGY CO.,LTD
Operating Condition: Running
Test Site: 3# SHIELDED ROOM
Operator: SAM
Test Specification: AC 230V/50Hz
Comment:
Start of Test: 8/16/2007 / 10:48:53AM

SCAN TABLE: "EN 22 T Voltage FIN"

Short Description: 150K-30MHz Voltage



MEASUREMENT RESULT: "HTW0816316\_fin"

8/16/2007 10:51AM

Table with 8 columns: Frequency MHz, Level dBµV, Transd dB, Limit dBµV, Margin dB, Detector, Line, PE. It lists measurement data points for various frequencies.

MEASUREMENT RESULT: "HTW0816316\_fin2"

8/16/2007 10:51AM

Table with 8 columns: Frequency MHz, Level dBµV, Transd dB, Limit dBµV, Margin dB, Detector, Line, PE. It lists measurement data points for various frequencies.

### 4.3. Harmonic current

For test instruments and accessories used see section 3.6.

#### Description of the test location

Test location: Shielded room No. 2

#### Limits of Harmonic Current

Test configuration and procedure see clause 7.1 of standard EN 61000-3-2: 2006.

#### 4.3.1. Description of the test set-up

##### 4.3.1.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum emanating results are recorded.

##### 4.3.1.2. Photo of the test set-up



#### Test result

The requirements are **Fulfilled**

**Remarks:** The limits are kept. For detailed results, please see the following page(s).

# Test Report of HTW

Standard used:	EN/IEC 61000-3-2 (2006) Quasi-stationary - Equipment class A
Observation time:	150s
Windows width:	10 periods - (EN/IEC 61000-4-7 Edition 2002)
Customer:	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Mains supply voltage:	AC 230V 50Hz
E. U. T.:	Gigabit Ethernet Switch
	M/N: TEG1224T
Date of test	14:40 16.Aug 2007
Operator:	Byron

## Test Result

E. U. T.:	PASS
Power Source:	PASS

## E. U. T. Result

### **Check harmonics 2..40 [exception odd 21..39]:**

<b>Harmonic(s) &gt; 150%:</b>	
Order (n):	None

<b>Harmonic(s) with average &gt; 100%:</b>	
Order (n):	None

### **Check odd harmonics 21..39:**

#### All Partial Odd Harmonics below partial limits.

<b>Harmonic(s) &gt; 150%:</b>	
Order (n):	None

<b>Harmonic(s) with average &gt; 150%:</b>	
Order (n):	None

## Power Source Result

<b>First dataset out of limit:</b>	
DS (time):	None

<b>Harmonic(s) out of limit:</b>	
Order (n):	None

**Average harmonic current results**

Hn	leff [A]	leff [%]	Limit [A]	Result
1	71.335E-3	100.000		
2	2.167E-3	3.037	1.08	PASS
3	66.601E-3	93.364	2.30	PASS
4	2.320E-3	3.253	430.00E-3	PASS
5	63.772E-3	89.399	1.14	PASS
6	2.094E-3	2.935	300.00E-3	PASS
7	59.856E-3	83.909	770.00E-3	PASS
8	2.070E-3	2.902	230.00E-3	PASS
9	54.883E-3	76.938	400.00E-3	PASS
10	1.941E-3	2.722	184.00E-3	PASS
11	49.179E-3	68.941	330.00E-3	PASS
12	1.753E-3	2.458	153.33E-3	PASS
13	42.898E-3	60.137	210.00E-3	PASS
14	1.656E-3	2.322	131.43E-3	PASS
15	36.383E-3	51.003	150.00E-3	PASS
16	1.452E-3	2.035	115.00E-3	PASS
17	29.909E-3	41.927	132.35E-3	PASS
18	1.283E-3	1.799	102.22E-3	PASS
19	23.694E-3	33.215	118.42E-3	PASS
20	1.059E-3	1.485	92.00E-3	PASS
21	17.961E-3	25.178	160.71E-3	PASS
22	888.040E-6	1.245	83.64E-3	PASS
23	12.918E-3	18.109	146.74E-3	PASS
24	695.848E-6	0.975	76.66E-3	PASS
25	8.663E-3	12.144	135.00E-3	PASS
26	595.777E-6	0.835	70.77E-3	PASS
27	5.250E-3	7.359	124.99E-3	PASS
28	462.887E-6	0.649	65.71E-3	PASS
29	2.746E-3	3.850	116.39E-3	PASS
30	342.553E-6	0.480	61.33E-3	PASS
31	1.322E-3	1.854	108.87E-3	PASS
32	248.911E-6	0.349	57.50E-3	PASS
33	1.262E-3	1.769	102.27E-3	PASS
34	242.676E-6	0.340	54.12E-3	PASS
35	1.561E-3	2.188	96.44E-3	PASS
36	218.483E-6	0.306	51.11E-3	PASS
37	1.625E-3	2.278	91.21E-3	PASS
38	190.318E-6	0.267	48.42E-3	PASS
39	1.453E-3	2.037	86.53E-3	PASS
40	190.922E-6	0.268	46.00E-3	PASS

**Maximum harmonic current results**

Hn	I <sub>eff</sub> [A]	I <sub>eff</sub> [%]	Limit [A]	Result
1	71.552E-3	100.000		
2	5.471E-3	7.647	1.62	PASS
3	66.805E-3	93.365	3.45	PASS
4	4.968E-3	6.943	645.00E-3	PASS
5	63.992E-3	89.434	1.71	PASS
6	5.163E-3	7.215	450.00E-3	PASS
7	60.041E-3	83.913	1.15	PASS
8	4.709E-3	6.581	345.00E-3	PASS
9	55.068E-3	76.962	600.00E-3	PASS
10	4.386E-3	6.129	276.00E-3	PASS
11	49.337E-3	68.952	495.00E-3	PASS
12	4.218E-3	5.894	229.99E-3	PASS
13	43.051E-3	60.167	315.00E-3	PASS
14	3.474E-3	4.855	197.15E-3	PASS
15	36.534E-3	51.059	225.00E-3	PASS
16	3.153E-3	4.407	172.50E-3	PASS
17	30.061E-3	42.013	198.52E-3	PASS
18	2.759E-3	3.856	153.33E-3	PASS
19	23.819E-3	33.289	177.63E-3	PASS
20	2.215E-3	3.096	138.00E-3	PASS
21	18.132E-3	25.340	160.71E-3	PASS
22	1.919E-3	2.682	125.46E-3	PASS
23	13.063E-3	18.256	146.74E-3	PASS
24	1.519E-3	2.123	114.99E-3	PASS
25	8.789E-3	12.283	135.00E-3	PASS
26	1.120E-3	1.566	106.16E-3	PASS
27	5.379E-3	7.517	124.99E-3	PASS
28	801.898E-6	1.121	98.57E-3	PASS
29	2.859E-3	3.996	116.39E-3	PASS
30	615.498E-6	0.860	92.00E-3	PASS
31	1.388E-3	1.940	108.87E-3	PASS
32	472.999E-6	0.661	86.25E-3	PASS
33	1.337E-3	1.869	102.27E-3	PASS
34	439.086E-6	0.614	81.18E-3	PASS
35	1.658E-3	2.318	96.44E-3	PASS
36	372.926E-6	0.521	76.66E-3	PASS
37	1.695E-3	2.368	91.21E-3	PASS
38	296.265E-6	0.414	72.63E-3	PASS
39	1.508E-3	2.108	86.53E-3	PASS
40	304.556E-6	0.426	69.00E-3	PASS

**Maximum harmonic voltage results**

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	230.06	100.027		
2	165.39E-3	0.072	0.2	PASS
3	404.95E-3	0.176	0.9	PASS
4	68.51E-3	0.030	0.2	PASS
5	16.08E-3	0.007	0.4	PASS
6	61.41E-3	0.027	0.2	PASS
7	45.37E-3	0.020	0.3	PASS
8	26.66E-3	0.012	0.2	PASS
9	20.14E-3	0.009	0.2	PASS
10	19.20E-3	0.008	0.2	PASS
11	35.71E-3	0.016	0.1	PASS
12	16.55E-3	0.007	0.1	PASS
13	37.44E-3	0.016	0.1	PASS
14	18.21E-3	0.008	0.1	PASS
15	29.06E-3	0.013	0.1	PASS
16	19.17E-3	0.008	0.1	PASS
17	36.14E-3	0.016	0.1	PASS
18	16.07E-3	0.007	0.1	PASS
19	27.46E-3	0.012	0.1	PASS
20	16.15E-3	0.007	0.1	PASS
21	27.43E-3	0.012	0.1	PASS
22	10.66E-3	0.005	0.1	PASS
23	20.08E-3	0.009	0.1	PASS
24	11.23E-3	0.005	0.1	PASS
25	22.07E-3	0.010	0.1	PASS
26	16.50E-3	0.007	0.1	PASS
27	11.31E-3	0.005	0.1	PASS
28	13.62E-3	0.006	0.1	PASS
29	12.55E-3	0.005	0.1	PASS
30	14.98E-3	0.007	0.1	PASS
31	7.97E-3	0.003	0.1	PASS
32	14.17E-3	0.006	0.1	PASS
33	12.48E-3	0.005	0.1	PASS
34	11.33E-3	0.005	0.1	PASS
35	10.64E-3	0.005	0.1	PASS
36	11.30E-3	0.005	0.1	PASS
37	16.24E-3	0.007	0.1	PASS
38	12.63E-3	0.005	0.1	PASS
39	9.48E-3	0.004	0.1	PASS
40	13.15E-3	0.006	0.1	PASS

#### 4.4. Voltage Fluctuation and Flicker

For test instruments and accessories used see section 3.6.

##### 4.4.1. Description of the test location

Test location: Shielded room No. 2

##### 4.4.2. Limits of voltage fluctuation and flicker

Test configuration and procedure see clause 5 of standard EN 61000-3-3: 1995+A1: 2001+A2: 2005.

##### 4.4.3. Description of the test set-up

###### 4.4.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum emanation are recorded.

###### 4.4.3.2. Photo of the test set-up



##### 4.4.4. Test result

The requirements are **Fulfilled**

**Remarks:** The limits are kept. For detailed results, please see the following page(s).

## Test Report of HTW

Standard used:	EN 61000-3-3 Flicker
Short time (Pst):	10 min
Observation time:	120 min (12 Flicker measurement)
Customer:	SHENZHEN TENDA TECHNOLOGY CO.,LTD
Flickermeter:	AC 230V / 50Hz
E. U. T.:	Gigabit Ethernet Switch M/N: TEG1224T
Date of test:	16:50 16.Aug 2007
Tester:	Byron

Test Result	PASS
-------------	------

### Maximum Flicker results

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.172	4.00	PASS
dt [s]	0.000	0.50	PASS

### Detail Flicker data

Flicker measurement 1	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.172	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 2	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.098	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 3	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.094	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 4	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.099	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 5	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.095	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 6	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.093	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 7	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.095	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 8	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.093	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 9	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.099	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 10	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.100	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 11	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.098	4.00	PASS
dt [s]	0.000	0.50	PASS

Flicker measurement 12	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.093	4.00	PASS
dt [s]	0.000	0.50	PASS

## 4.5. Electrostatic discharge

For test instruments and accessories used see section 3.6.

### 4.5.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: Aug 20, 2007

Operator: Byron

### 4.5.2. Severity levels of electrostatic discharge

4.5.2.1. Severity level: Contact Discharge at  $\pm 4\text{KV}$  Air Discharge at  $\pm 8\text{KV}$

Level	Test Voltage Contact Discharge (KV)	Test Voltage Air Discharge (KV)
1	2	2
2	4	4
3	6	8
4	8	15
X	Special	Special

4.5.2.2. Performance criterion: **B**

### 4.5.3. Description of the test set-up

4.5.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum susceptible results are recorded.

4.5.3.2. Photo of the test set-up



**4.5.4. Test specification:**

<u>Contact discharge voltage:</u>	<input checked="" type="checkbox"/> 2 kV	<input checked="" type="checkbox"/> 4 kV	<input checked="" type="checkbox"/> 6kV
<u>Number of discharges:</u>	<input checked="" type="checkbox"/> $\geq 10$	<input type="checkbox"/> $\geq 25$	
<u>Air discharge voltage:</u>	<input checked="" type="checkbox"/> 2 kV	<input checked="" type="checkbox"/> 4 kV	<input checked="" type="checkbox"/> 8 kV
<u>Number of discharges:</u>	<input checked="" type="checkbox"/> $\geq 10$	<input type="checkbox"/> $\geq 25$	
<u>Type of discharge:</u>	Direct discharge	<input checked="" type="checkbox"/> Air discharge	
		<input checked="" type="checkbox"/> Contact discharge	
	Indirect discharge	<input checked="" type="checkbox"/> Contact discharge	
<u>Polarity:</u>	<input checked="" type="checkbox"/> Positive	<input checked="" type="checkbox"/> Negative	
<u>Discharge location:</u>	<input checked="" type="checkbox"/> see photo documentation of the test set-up		
	<input checked="" type="checkbox"/> all external locations accessible by hand		
	<input checked="" type="checkbox"/> horizontal plate (HCP)		
	<input checked="" type="checkbox"/> vertical coupling plate (VCP)		

**4.5.5. Test result**The requirements are **Fulfilled**Performance Criterion: **B****Remarks:** During the test no deviation was detected to the selected operation mode(s).**4.6. Radiated, radio-frequency, electromagnetic field**

For test instruments and accessories used see section 3.6.

**4.6.1. Description of the test location and date**

Test location: Shielded room No. 4

Date of test: Aug 20, 2007

Operator: Byron

**4.6.2. Severity levels of radiated, radio-frequency, electromagnetic field**

4.6.2.1. Severity level: 3 V/m

Level	Field Strength (V/m)
1.	1
2.	3
3.	10
X	Special

4.6.2.2. Performance criterion: **A**

#### 4.6.3. Description of the test set-up

##### 4.6.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum susceptible results are recorded.

##### 4.6.3.2. Photo of the test set-up



#### 4.6.4. Test specification:

Frequency range:

■ 80 MHz to 2000 MHz

Field strength:

■ 3 V/m    ■ 10V/m

EUT - antenna separation:

■ 3 m

Modulation:

■ AM: 80 %  
■ sinusoidal 1000Hz

Frequency step:

■ 1 % with 3s dwell time

Antenna polarisation:

■ horizontal                    ■ vertical

#### 4.6.5. Test result

The requirements are **Fulfilled**

Performance Criterion: **A**

**Remarks:**     During the test no deviation was detected to the selected operation mode(s).

## 4.7. Electrical fast transients / Burst

For test instruments and accessories used see section 3.6.

### 4.7.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: Aug 20, 2007

Operator: Byron

### 4.7.2. Severity levels of electrical fast transients / Burst

4.7.2.1. Severity level:  $\pm 1000V$  for AC power supply lines

Open circuit output test voltage and repetition rate of the impulses				
Level	On power port, PE		On I/O signal, data and control ports	
	V peak(KV)	Repetition rate (KHz)	Voltage peak	Repetition rate (KHz)
1.	0.5	5 or 100	0.25	5 or 100
2.	1	5 or 100	0.5	5 or 100
3.	2	5 or 100	1	5 or 100
4.	4	5 or 100	2	5 or 100
X	Special	Special	Special	Special

4.7.2.2. Performance criterion: **B**

### 4.7.3. Description of the test set-up

4.7.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum susceptible results are recorded.

4.7.3.2. Photo of the test set-up





#### 4.7.4. Test specification:

- Coupling network:                       0.5 kV       1 kV       2 kV
- Coupling clamp:                         0.5 kV       1 kV
- Burst frequency:                         5.0 kHz
- Coupling duration:                        $\geq 60$  s
- Polarity:                                     positive                       negative

#### 4.7.5. Coupling points

Cable description:                      AC power line : L, N, PE, L+N, L+PE, N+PE, L+N+PE  
 Signal Line

---

Screening:                                     screened                       unscreened  
 Status:                                         passive                       active  
 Signal transmission:                       analogue                       digital  
 Length:                                         1.0 m

#### 4.7.6. Test result

The requirements are **Fulfilled**

Performance Criterion: **B**

**Remarks:**      During the test no deviation was detected to the selected operation mode(s).

## 4.8. Surge

For test instruments and accessories used see section 3.6.

### 4.8.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: Aug 20, 2007

Operator: Byron

### 4.8.2. Severity levels of surge

4.8.2.1. Severity level: Line to line:  $\pm 1\text{KV}$  Line to earth:  $\pm 2\text{KV}$

Level	Test Voltage (KV)
1	0.5
2	1.0
3	2.0
4	4.0
*	Special

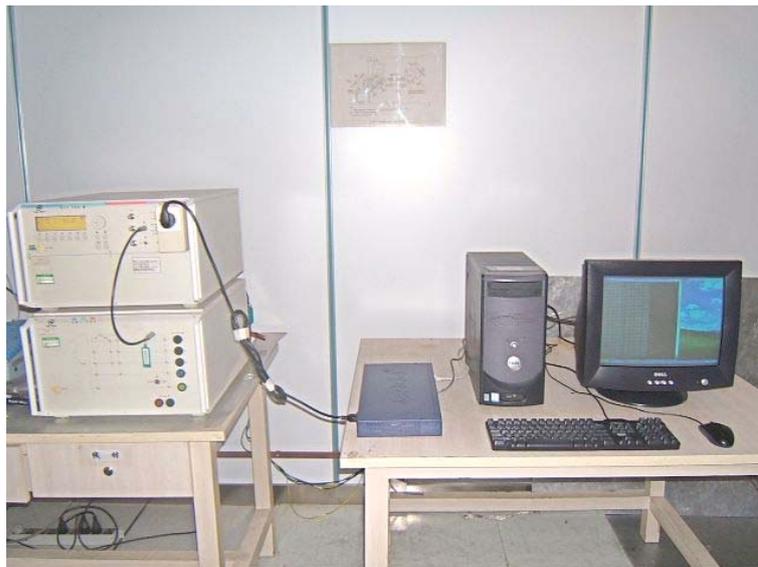
4.8.2.2. Performance Criterion: **B**

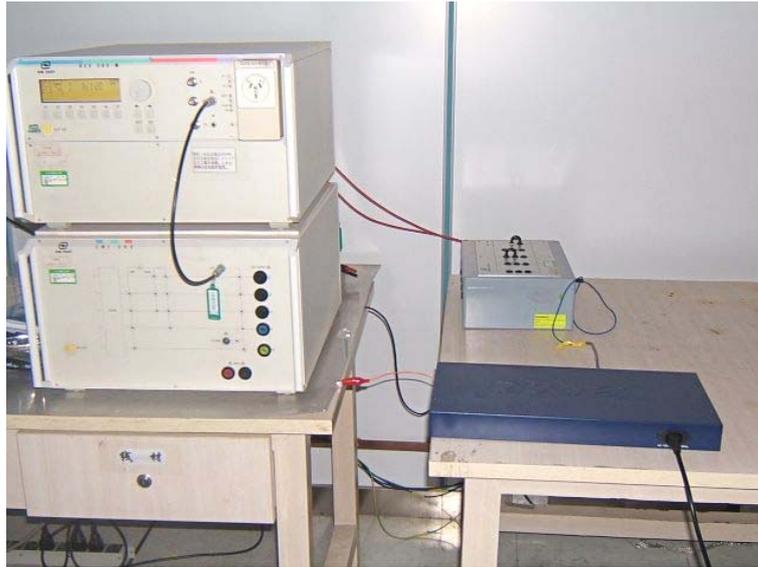
### 4.8.3. Description of the test set-up

4.8.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum susceptible results are recorded.

4.8.3.2. Photo of the test set-up





#### 4.8.4. Test specification:

Pulse amplitude-Power line sym.:                     0.5 kV     1 kV     2 kV     4 kV  
Source impedance: 2  $\Omega$  + 18 $\mu$ F

Pulse amplitude-Power line unsym.:                     0.5 kV     1 kV     2 kV     4 kV  
Source impedance: 12  $\Omega$  + 9 $\mu$ F

Signal Line (indoor)     0.5 kV

Number of surges:     5 Surges/Phase angle

Phase angle:      0°         90°         180°         270°

Repetition rate:     60 s

Polarity:     positive     negative

#### 4.8.5. Coupling points

Cable description:    AC power line: L-N, L-PE, N-PE  
Signal Line

Screening:     screened     unscreened  
Status:      passive     active  
Signal transmission:     analogue     digital  
Length:      1.0 m

#### 4.8.6. Test result

The requirements are **Fulfilled**

Performance Criterion: **B**

**Remarks:**        During the test no deviation was detected to the selected operation mode(s).

## 4.9. Conducted disturbances induced by radio-frequency fields

For test instruments and accessories used see section 3.6.

### 4.9.1. Description of the test location and date

Test location: Shielded room No. 2

Date of test: Aug 20, 2007

Operator: Byron

### 4.9.2. Severity levels of conducted disturbances induced by radio-frequency fields discharge

4.9.2.1. Severity Level: 3V

Level	Field Strength (V)
1.	1
2.	3
3.	10
X	Special

4.9.2.2. Performance Criterion: **A**

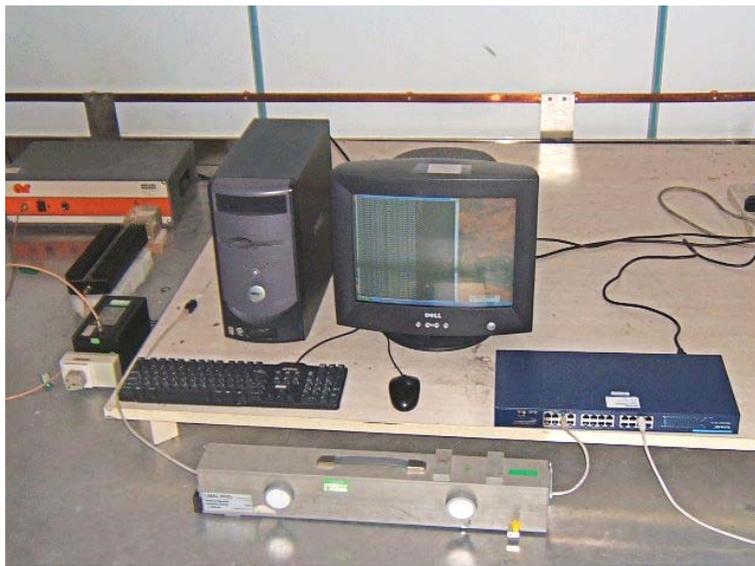
### 4.9.3. Description of the test set-up

4.9.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum susceptible results are recorded.

4.9.3.2. Photo of the test set-up





**4.9.4. Test specification:**

- Frequency range: ■ 0.15 MHz to 80 MHz
- Test voltage: ■ 3 V
- Test Line: AC mains  
Signal Line
- Modulation: ■ AM: 80 %  
■ sinusoidal 1000Hz
- Frequency step: ■ 1 % with 3s dwell time

**4.9.5. Coupling points**

- Cable description : AC power line  
Signal Line

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- Screening: o screened ■ unscreened
- Status: o passive ■ active
- Signal transmission: ■ analogue o digital
- Length: ■ 1.0 m

**4.9.6. Test result**

The requirements are **Fulfilled**

Performance Criterion: **A**

**Remarks:** During the test no deviation was detected to the selected operation mode(s).

## 4.10. Magnetic Field Immunity

The test is not applicable.

## 4.11. Voltage Dips and Interruptions

For test instruments and accessories used see section 3.6.

### 4.11.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: Aug 20, 2007

Operator: Byron

### 4.11.2. Severity levels of voltage dips and interruptions

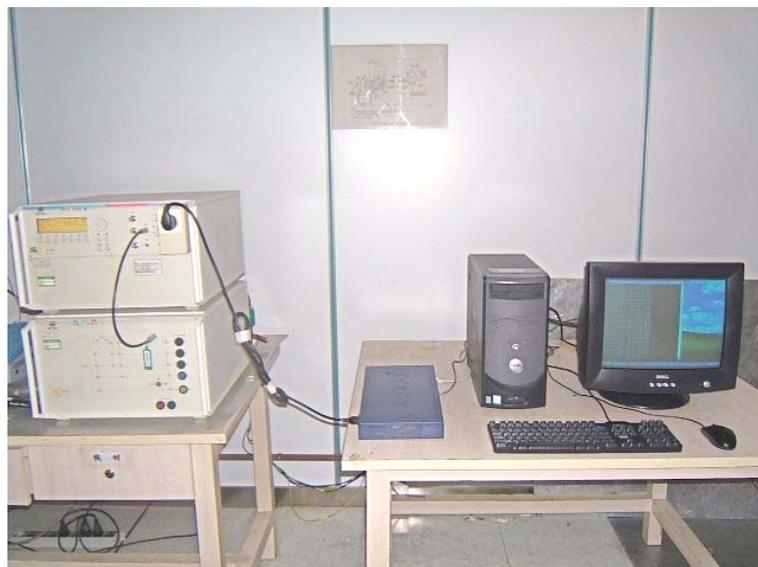
Test Level (%Ut)	Voltage Dip And Short Interruptions (%Ut)	Performance Criterion	Duration (In Period)
0	100	B	0.5
70	30	C	25
0	100	C	250

### 4.11.3. Description of the test set-up

#### 4.11.3.1. Operating Condition

The EUT is running with PC system during the test, and the results of the maximum susceptible results are recorded.

#### 4.11.3.2. Photo of the test set-up



**4.11.4. Test specification:**

<u>Nominal Mains Voltage (<math>V_N</math>):</u>	■ 230 V AC
<u>Number of voltage fluctuations:</u>	■ 3
<u>Level of reduction(dip) / duration:</u>	■ 100 % / 10ms    ■ 30 % / 500ms
<u>Nominal Mains Voltage (<math>V_N</math>):</u>	■ 230 V AC
<u>Number of Interruptions:</u>	■ 3
<u>Duration of the Interruption:</u>	■ 5000 ms

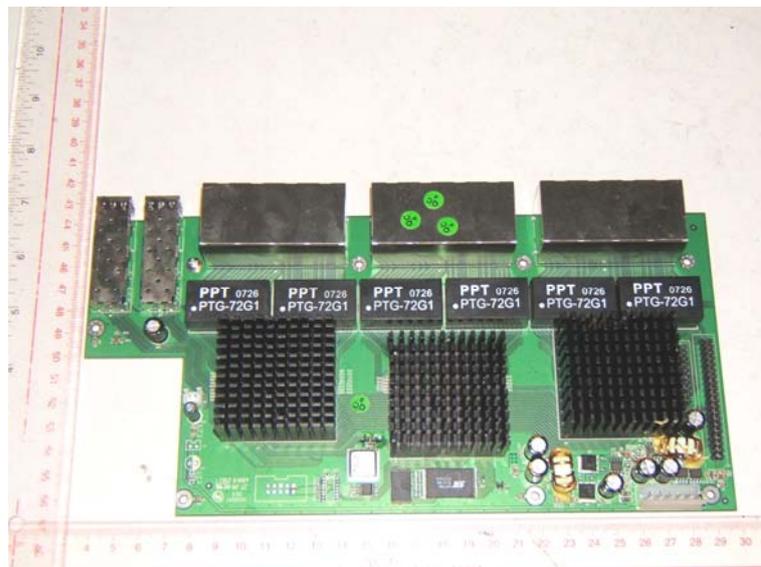
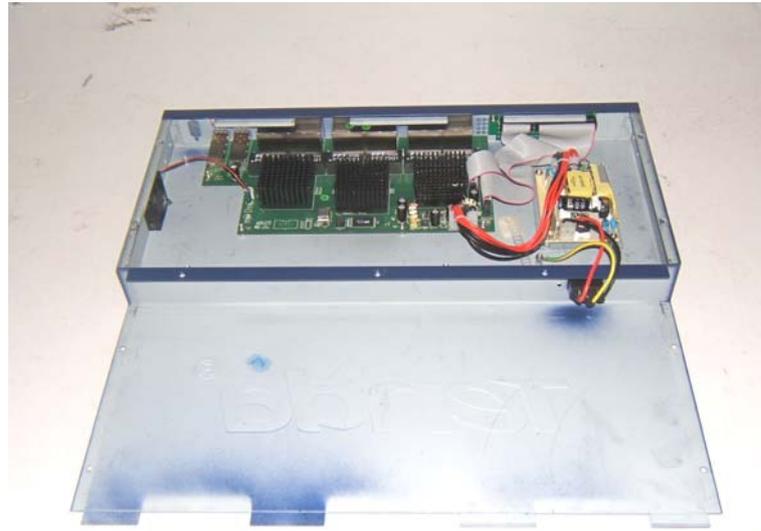
**4.11.5. Test result**

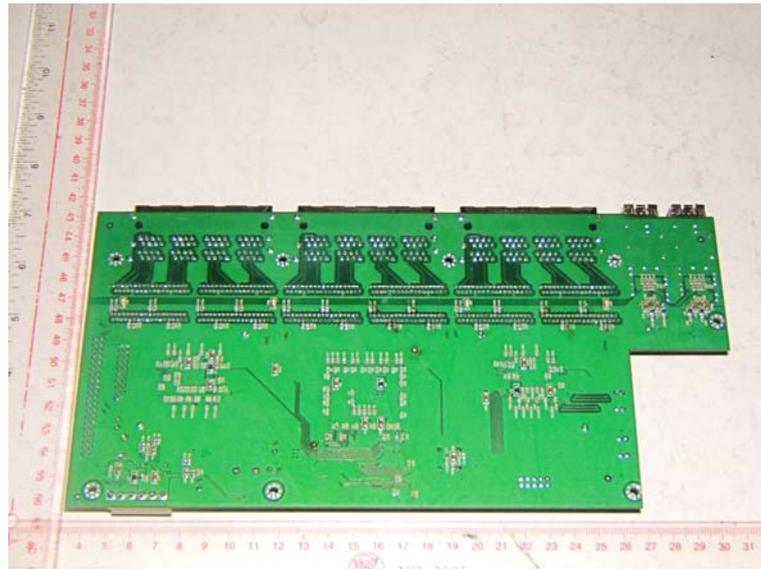
The requirements are **Fulfilled**  
Performance Criterion **See section 4.11.2**

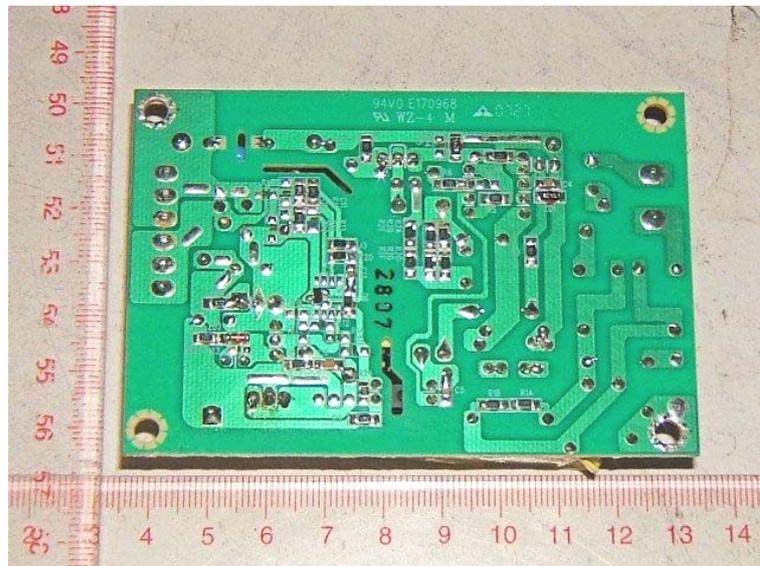
**Remarks:** During the test no deviation was detected to the selected operation mode(s).

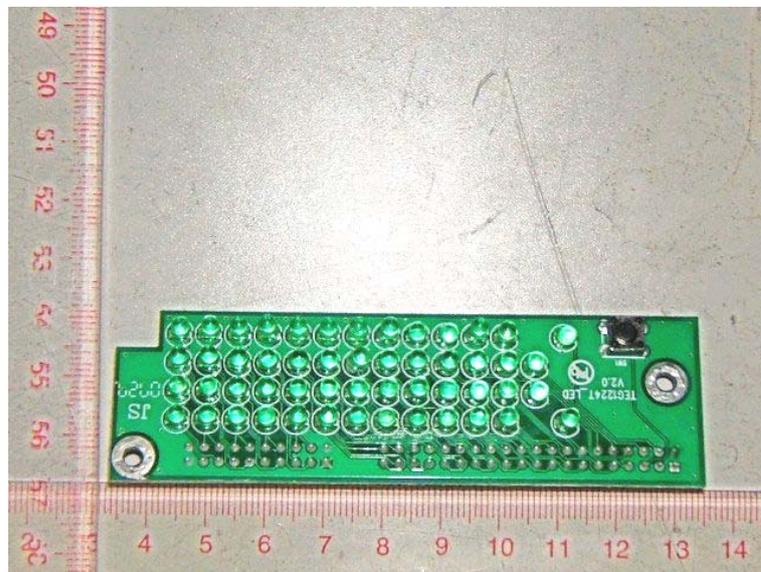
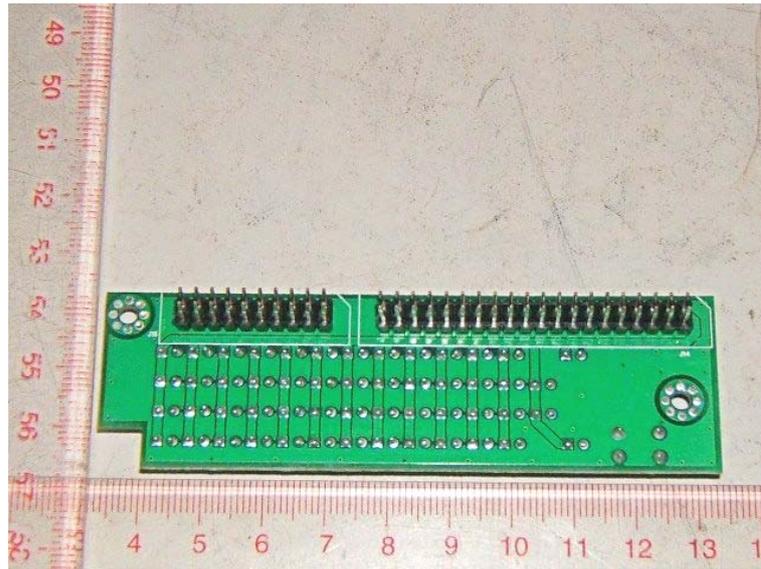


### 5.2. Internal photos of the EUT









.....End of Report.....