TÜVRheinland®

Produkte
Products

Prüfbericht - Nr.: *Test Report No.:*	**16012823 003**			**Seite 1 von 12** *Page 1 of 12*
Auftraggeber: *Client:*	**Eaglerise Electric & Electronic (Foshan) Co., Ltd** *Guicheng Sci-Tech Industrial Park Jianping Road, Nanhai District Foshan, Guangdong, P.R. China*			
Gegenstand der Prüfung: *Test item:*	**Electronic Convertor**			
Bezeichnung: *Identification:*	**EET210LK**	**EET150LK**	**Serien-Nr.:** *Serial No.:*	**Pre-production Model**
Wareneingangs-Nr.: *Receipt No.:*	**173052155**		**Eingangsdatum:** *Date of receipt:*	**07.Apr.2010**
Prüfort: *Testing location:*	**Refer to section 2.1**			
Prüfgrundlage: *Test specification:*	**EN 55015:2006+A1+A2** **EN 61547:1995+A1** **EN 61000-3-2:2006** **EN 61000-3-3:2008**			
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*			
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (Guangdong) Ltd.**			

geprüft */ tested by:*

Datum / Date	Name/Stellung / Name/Position	Unterschrift / Signature
Apr.20, 2010	Ken Kuang Project Engineer	

kontrolliert/ *reviewed by:*

Datum / Date	Name/Stellung / Name/Position	Unterschrift / Signature
20. Apr. 2010	Richard Lu Project Manager	Richard Lu

Sonstiges/ *Other aspects:*

Abkürzungen:				*Abbreviations:*			
	P(ass)	=	*entspricht Prüfgrundlage*		*P(ass)*	=	*passed*
	F(ail)	=	*entspricht nicht Prüfgrundlage*		*F(ail)*	=	*failed*
	N/A	=	*nicht anwendbar*		*N/A*	=	*not applicable*
	N/T	=	*nicht getestet*		*N/T*	=	*not tested*

TEST SUMMARY

4.1.1 RADIATED EMISSION
RESULT: *Pass*

Contents

1. General Remarks

When applying the basic standard in this test report, the latest amendment is always included.

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test Result

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

Guangzhou Auto Market, Yuan Gang Section of Guangshan Road
Guangzhou 510650
P. R. China

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Test Equipment	Model	Manufacturer	Serial No.	Cal Until
TÜV Rheinland (Guangdong) Ltd. EMC Laboratory				
Harmonics & Flicker				☐
Harmonic and Flicker Analyzer	DPA 500	EM TEST	0304-01	16.Mar.2011
AC Source	ACS 500	EM TEST	0304-01	16.Mar.2011
Disturbance Voltage				☐
EMI Test Receiver	ESCS30	Rohde&Schwarz	100316	16.Mar.2011
EMI Test Receiver	ESCI	Rohde&Schwarz	100178	16.Mar.2011
Artificial Mains Network	ESH2-Z5	Rohde&Schwarz	100114	16.Mar.2011
Two-Line V-Network	ESH3-Z5	Rohde&Schwarz	100308	16.Mar.2011
V-Network	ENV216	Rohde&Schwarz	100122	16.Mar.2011
Pulse Limiter	ESH3-Z2	Rohde&Schwarz	100701	16.Mar.2011
Discontinuous Disturbance Voltage				☐
Click Analyzer	DIA1512D	SCHNAFFNER	21081	16.Mar.2011
Artificial Mains Network	ESH2-Z5	Rohde&Schwarz	100114	16.Mar.2011
Disturbance Power				☐
EMI Test Receiver	ESCS30	Rohde&Schwarz	100316	16.Mar.2011
Absorbing Clamp	MDS-21	Rohde&Schwarz	100144	16.Mar.2011
Radiated Emission				☒
EMI Test Receiver	Rohde&Schwarz	ESCI	100216	16.Mar.2011

Test Equipment	Model	Manufacturer	Serial No.	Cal Until
Spectrum Analyzer	Rohde&Schwarz	FSP30	100286	16.Mar.2011
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100385	18.Jul.2010
Trilog-Broadband Antenna	Schwarzbeckmess-elektronik	VULB9168	209	07.Nov.2010
Large Loop Antenna	Rohde & Schwarz	HM 020	100021	16.Mar.2011
Electrostatic Discharge(ESD)				☐
ESD Simulator	NSG438	SCHNAFFNER	533	16.Mar.2011
Radiated Susceptibility				☐
Signal Generator	Rohde & Schwarz	SMR27	100125	16.Mar.2011
Power Amplifier	Amplifier Research	250W1000A	0320145	16.Mar.2011
Power Amplifier	Amplifier Research	50S1G4A	0320437	16.Mar.2011
Dual Channel Power Meter	Rohde & Schwarz	NVRD	101432	26.Nov.2010
Field Probe	Amplifier Research	FP5080 Kit	310947	07.Feb.2012
Log-Periodic Antenna	Amplifier Research	AT1080	0320070	N/A
Horn Antenna	Amplifier Research	AT4002	312778	N/A
Electrical Fast Transient(EFT)				☐
EMC Immunity Test Instrument/PDA	Modula6100/MHC6501	SCHNAFFNER	34415/0149	16.Mar.2011
Ultra Compact Simulator	UCS 500 M4	EM TEST	V0707102252	16.Mar.2011
Surge				☐
EMC Immunity Test Instrument/PDA	Modula6100/MHC6501	SCHNAFFNER	34415/0149	16.Mar.2011
Ultra Compact Simulator	UCS 500 M4	EM TEST	V0707102252	16.Mar.2011
Conducted Susceptibility (150kHz-230MHz)				☐
RF generator with 6 dB Attenuator	NSG2070	SCHNAFFNER	1122	16.Mar.2011

Test Equipment	Model	Manufacturer	Serial No.	Cal Until
Coupling Decoupling Network	CDN M016	SCHNAFFNER	21253	16.Mar.2011
Coupling Decoupling Network	CDN-M2/M3	EM TEST	0604-02	16.Mar.2011
EM Clamp	EM 101	EM TEST	35697	16.Mar.2011
Voltage Dips and Interruptions				☐
EMC Immunity Test Instrument/PDA	Modula6100/MHC650 1	SCHNAFFNER	34415/0149	16.Mar.2011
Ultra Compact Simulator	UCS 500 M4	EM TEST	V0707102252	16.Mar.2011
Power-frequency Magnetic Fields(PFM)				☐
Magnetic Field Coil	EM TEST	MS 100	1206-36	16.Mar.2011
Ultra Compact Simulator	UCS 500 M4	EM TEST	V0707102252	16.Mar.2011

☐: ***Not Used***
☒: ***Used***

3. Replacement of Standard

The standard EN 55015:2006 is replaced by EN 55015:2006+A1+A2.
The standard EN 61000-3-3:1995+A1+A2 is replaced by EN 61000-3-3:2008.

Considering the different requirement between the new standards and the ones to be replaced, radiated emission (30-300MHz) tests were performed on EET210LK and EET150LK.

4. Necessary Tests

4.1 Test Results EMISSION

4.1.1 Radiated Emission

RESULT: **Pass**

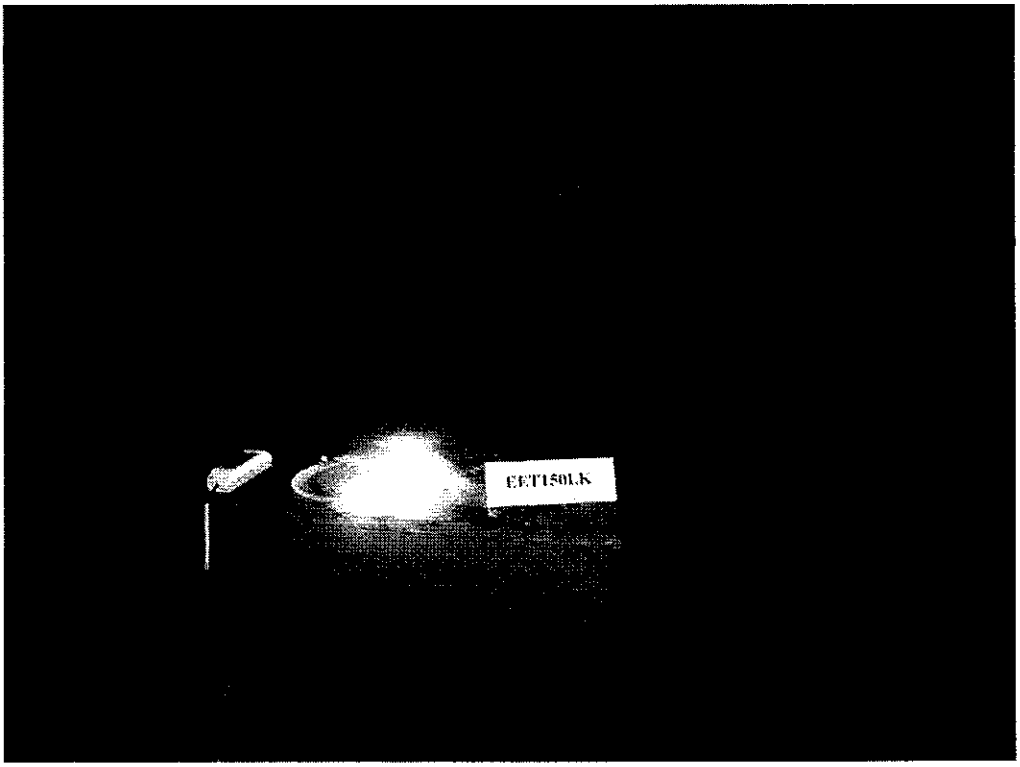
Test Specification

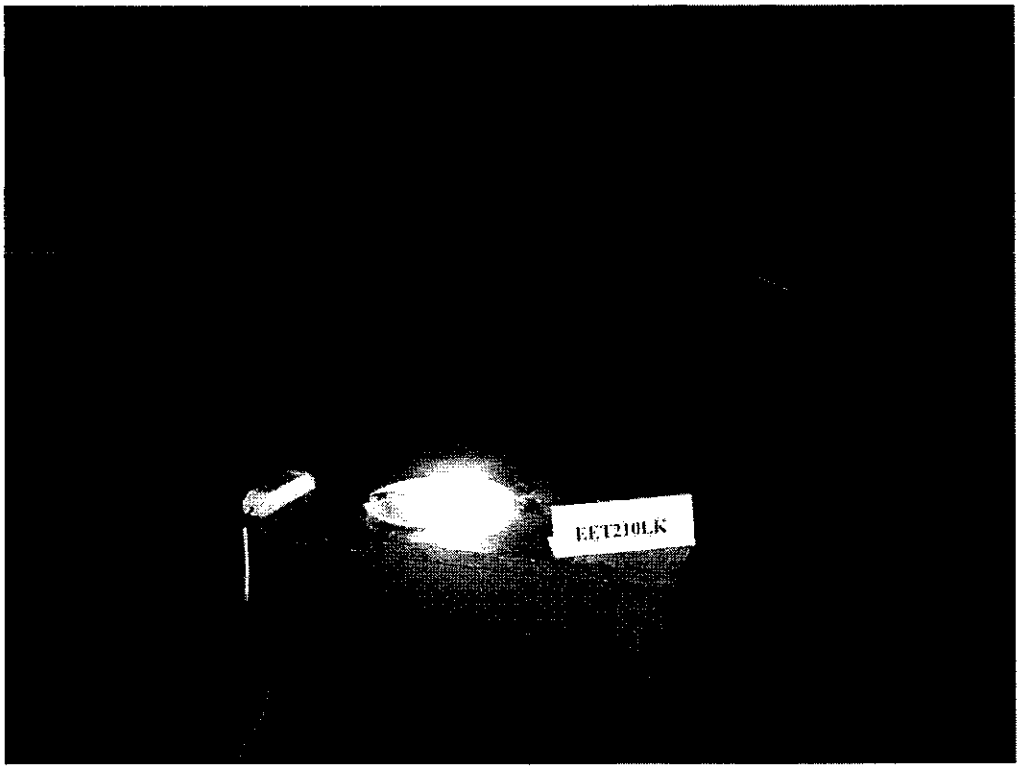
Test procedure	:	EN 55015:2006+A1+A2, Clause 9
Port	:	Enclosure
Frequency range	:	30MHz -300MHz
Test site	:	SAC
Limits	:	EN 55015:2006+A1+A2, Clause 4.4, Table 3b

Test Setup

Date of testing	:	Apr. 16, 2010
Input voltage	:	AC 240V, 50Hz
Operation mode	:	On (full load)
Temperature	:	23°C
Humidity	:	50%
Air pressure	:	101kPA

Photograph 1: Set-up for Radiated Emission





Test Result

Measurement uncertainty: ±4.94dB (k=2, σ= 95%)

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector has been omitted.

Disturbances other than those mentioned are small or not detectable.

Refer to the attached appendix 1.

5. List of Tables

6. List of Photographs

Prüfbericht - Nr.: 16012823 001
Test Report no.

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

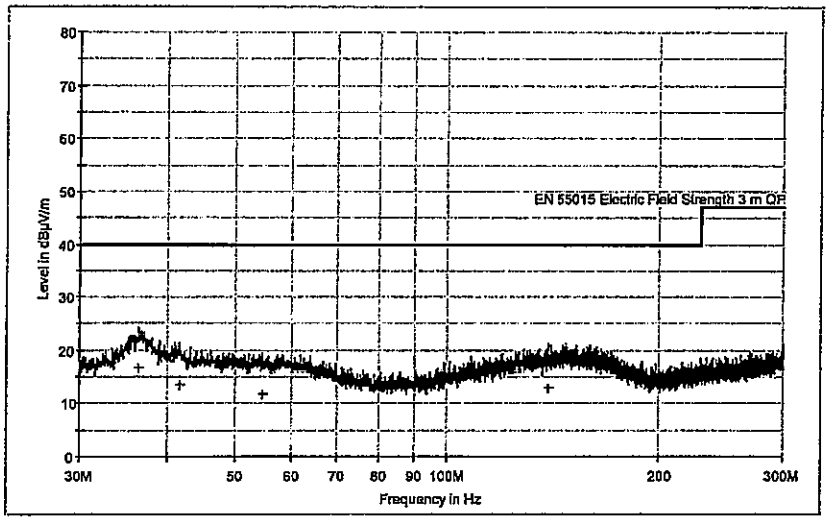
Test Information

Manufacturer:	Eaglerise
Test Item:	Electronic convertor
Identification	EET150LK
Test Standard:	EN 55015:2006+A1+A2
Test Detail:	RE
Operation Mode:	Full load
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC240V / 50Hz
Receipt No.:	173052155 100
Report No.	16012823 003
Result:	Pass
Comment:	Horizontal

Sign-off Test Data

Subrange 1

Frequency Range:	30MHz – 300MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
36.400000	16.8	14.2	23.2	40.0	H
41.600000	13.7	14.7	26.3	40.0	H
54.600000	11.7	14.0	28.3	40.0	H
138.800000	13.0	14.9	27.0	40.0	H

Date: 4/16/2010 - Time: 8:09:44 PM Tested by: WDZ 2010 4 16 Checked Reviewed by: DW 2010.4.19 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

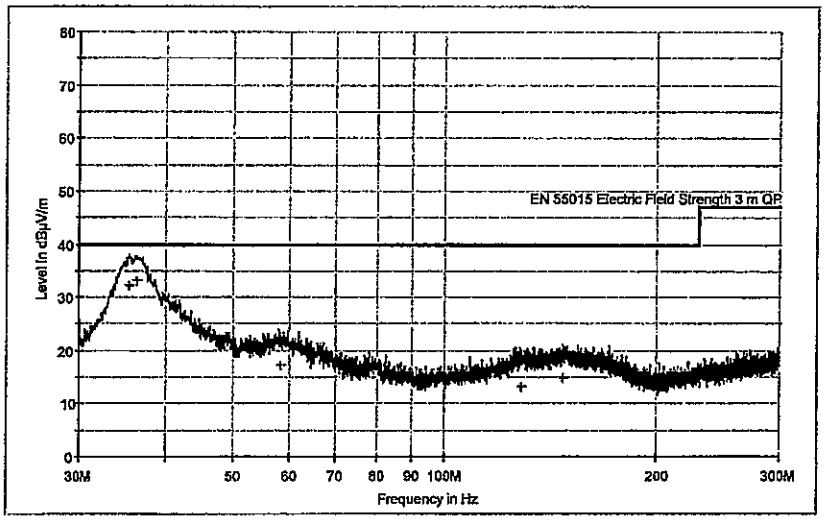
Test Information

Manufacturer:	Eaglerise
Test Item:	Electronic convertor
Identification	EET150LK
Test Standard:	EN 55015:2006+A1+A2
Test Detail:	RE
Operation Mode:	Full load
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC240V / 50Hz
Receipt No.:	173052155 100
Report No.	16012823 003
Result:	Pass
Comment:	Vertical

Sign-off Test Data

Subrange 1

Frequency Range:	30MHz – 300MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
35.400000	32.4	14.1	7.6	40.0	V
36.400000	33.2	14.2	6.8	40.0	V
58.200000	17.4	13.8	22.6	40.0	V
128.400000	13.4	14.1	26.6	40.0	V
147.750000	15.0	15.5	25.0	40.0	V

Date: 4/16/2010 - Time: 7:57:59 PM

Tested by: WDZ 2010 4 16 Checked

Reviewed by: DW 2010.4.19 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

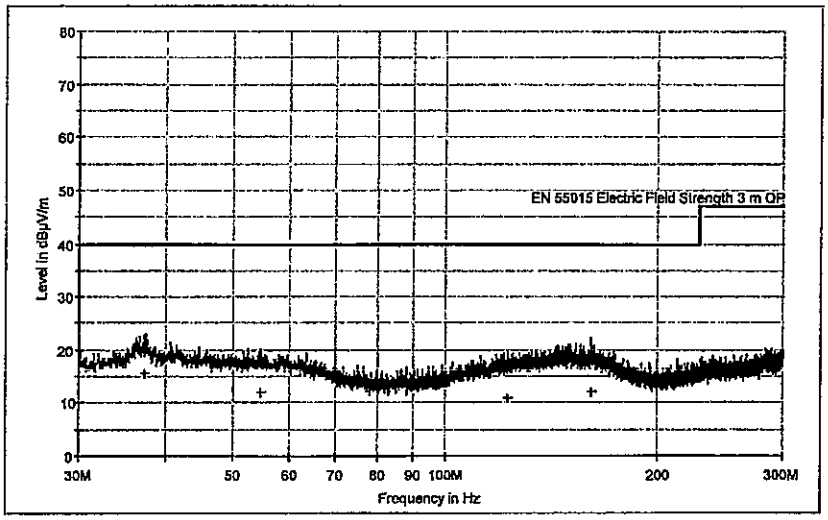
Test Information

Manufacturer:	Eaglerise
Test Item:	Electronic convertor
Identification	EET210LK
Test Standard:	EN 55015:2006+A1+A2
Test Detail:	RE
Operation Mode:	Full load
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC240V / 50Hz
Receipt No.:	173052155 100
Report No.	16012823 003
Result:	Pass
Comment:	Horizontal

Sign-off Test Data

Subrange 1

Frequency Range:	30MHz – 300MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
37.300000	15.6	14.4	24.4	40.0	H
54.750000	12.0	14.0	28.0	40.0	H
122.400000	11.0	13.7	29.0	40.0	H
161.100000	12.2	15.5	27.8	40.0	H

Date: 4/16/2010 - Time: 6:42:10 PM

Tested by: WDZ 2010 4 16 Checked

Reviewed by: DW 2010.4.19 Check

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

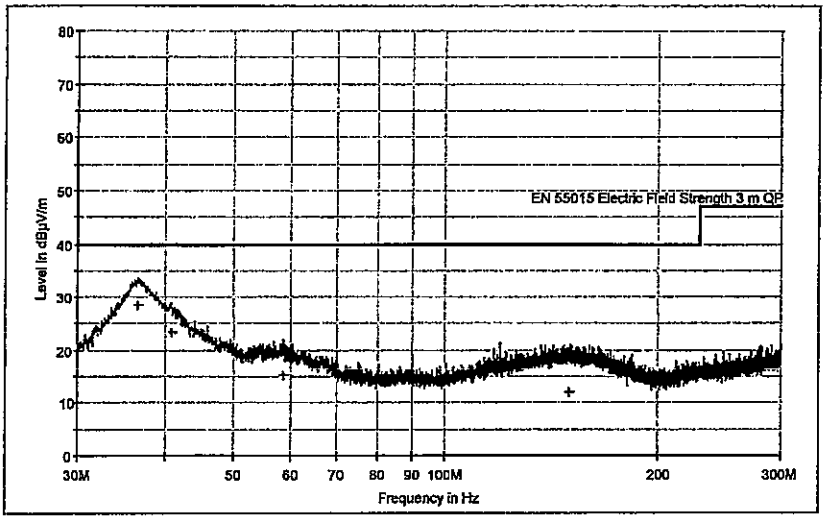
Test Information

Manufacturer:	Eaglerise
Test Item:	Electronic convertor
Identification	EET210LK
Test Standard:	EN 55015:2006+A1+A2
Test Detail:	RE
Operation Mode:	Full load
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	AC240V / 50Hz
Receipt No.:	173052155 100
Report No.	16012823 003
Result:	Pass
Comment:	Vertical

Sign-off Test Data

Subrange 1

Frequency Range:	30MHz – 300MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
36.600000	28.7	14.3	11.3	40.0	V
40.700000	23.5	14.8	16.5	40.0	V
58.500000	15.2	13.8	24.8	40.0	V
120.000000	18.4	13.6	21.6	40.0	V
149.400000	12.1	15.6	27.9	40.0	V

Date: 4/16/2010 - Time: 6:50:14 PM

Tested by: WDZ 2010 4 16 Checked

Reviewed by: DW 2010.4.19 Checked