INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)
COMMISSION ELECTROTECHNIQUE INTERNATIONALE (CEI)

Ref. Certif. No.
JPTUV-003560-M1

**IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF ELECTRICAL EQUIPMENT (IECEE)
CB SCHEME**

***SYSTÈME CEI D'ESSAIS DE CONFORMITÉ ET DE CERTIFICATION DES EQUIPEMENTS ELECTRIQUE (IECEE)
METHODE OC***

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product
Produit

LCD Monitor

Name and address of the applicant
Nom et adresse du demandeur

Compal Electronics, Inc.
No. 581, Jui-Kuang Rd., Neihu
TAIPEI 114, TAIWAN, R.O.C.

Name and address of the manufacturer
Nom et adresse du fabricant

Compal Electronics, Inc.
No. 581, Jui-Kuang Rd., Neihu
TAIPEI 114, TAIWAN, R.O.C.

Name and address of the factory
Nom et adresse de l'usine

(See appendix for factories information)

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

Input rating : DC 12V, 5A
Protection Class : III

Trade mark (if any)
Marque de fabrique (si elle existe)

1) COMPAL
2) TOSHIBA, HITACHI, LEGEND, Compaq
3) HITACHI

Model/type Ref.
Ref. de type

1) Cx8yy
2) xMx7x
3) CML170SX* 2
(x, yy, * = 0-9, A-Z or blank)

Additional information (if necessary)
Information complémentaire (si nécessaire)

For differences between the models, refer to the test report. Remark : Replaces JPTUV-003560 dated 14.11.2001, due to first modification.

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

PUBLICATION	EDITION
IEC 60950:1991+A1+A2+A3+A4 inclusive CENELEC Common Modifications National differences see test report	

as shown in the Test Report Ref. No. which form part of this certificate
comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce certificat

12001312 002

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

TÜV

TÜV Rheinland Japan Ltd.
3-19-5 Shin-Yokohama
222-0033 Japan

Date 17.01.2002

Signature

Dipl. Ing. M. Lechtermann

Issue 1998-09

Appendix to CB Certificate JPTUV-003560-M1
Report Number: 12001312 002

Name and address of the manufacturer
Compal Electronics, Inc.
No. 581, Jui-Kuang Rd., Neihu
Taipei 114
Taiwan, R.O.C.

Name and address of the factory(ies)
Compal Electronics Inc.

8, Nan Tung Road
Ping Cheng Hsiang, Taoyuan Hsien
Taiwan, R.O.C. 32428

Compal Electronics (China) Co., Ltd.

Tong Feng East Road, Kunshan
Economic Technical Development Zone
Kunshan, Jiangsu, P.R. China

Date: 17.01.2002

Dipl.-Ing. M. Lechtermann

Yokohama Head Office
Shin Yokohama Daini Center Bldg. 9F
3-19-5, Shin Yokohama
Kohoku-ku, Yokohama 222-0033, Japan
Tel. : (045) 470-1850
Fax : (045) 473-5221
e-mail: info@jpn.tuv.com

Yokohama Laboratory
Festo Building 5F
1-26-10, Hayabuchi, Tsuzuki-ku
Yokohama 224-0025, Japan
Tel. : (045) 592-1371
Fax : (045) 592-1374
e-mail: yoko-lab@jpn.tuv.com

TEST REPORT FOR AN ADDITIONAL APPROVAL

IEC 950

Safety of information technology equipment

Report

Reference No. ..... : 12001312 002

Compiled by (+ signature) ..... : M. Kera

Approved by (+ signature) ..... : P. Petschnig

Date of issue ..... : Jan., 14, 2002

Contents ..... : 4 pages

..... :

This report is based on a blank test report that was prepared by KEMA using information obtained from the TRF originator (see below).

Testing laboratory

Testing laboratory ..... : TÜV Rheinland Japan Ltd., Yokohama Laboratories

Address ..... : Festo Bldg. 5F, 1-26-10 Hayabuchi, Tsuzuki-Ku, Yokohama 224-0025, Japan

Testing location ..... : TÜV Rheinland Japan Ltd., Yokohama Laboratories

Client

Name ..... : Compal Electronics, Inc.

Address ..... : No. 581, Juikuang Rd., Nei Hu, Taipei 114, Taiwan, R.O.C.

Test specification

Standard ..... : IEC 60950:1991+A1:1992+A2:1993+A3:1995+A4:1996
EN 60950:1992+A1:1993+A2:1993+A3:1995+A4:1997+A11:1997
EMKO-TSE(74-SEC)207/94, UL 1950, C22.2 No. 950 3rd edition, AS 3260

Test procedure ..... : CB Scheme

Procedure deviation ..... : Austria, Australia, Belgium, Canada, The Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Ireland, Israel, Italy, Japan, The Republic of Korea, The Netherlands, Norway, Poland, Russian, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States of America

Non-standard test method ..... : N.A.

Test Report Form/blank test report

Test Report Form No. ..... : Cbaddapp.doc

TRF originator. ..... : TÜV Rheinland

Test item

Description ..... : LCD Monitor

Trademark ..... : 1. COMPAL, 2. Toshiba, 3. Hitachi, 4. Compaq, 5. Legend, 6. HITACHI

Model and/or type reference ..... : 1. Cx8yy (x= 0-9, A-Z or blank, yy = 0-9, A-Z or blank)
2.- 5. xMx7x (x= 0-9, A-Z or blank)
6. CML170SX* 2 (* =0-9, A-Z or blank)

Manufacturer ..... : Same as client

Rating ..... : 12Vdc, 5A

The construction of the LCD Monitor model Cx8yy was modified as follows:

1. Add alternate source of DC/AC inverter.
2. Added alternate source of LCD panel.

For the above described modification the following testing was considered to be necessary:

Modification	Testing	Comments	Result
1	- Limited current circuits measurements	Test result see appended table 2.4. For source, see appended table 1.5.1.	**P**
2	N/A	No safety impact. For source see appended table 1.5.1.	**P**

Factory:
1. Compal Electronics Inc.
   8, Nan Tung Road, Ping Cheng Hsiang, Taoyuan Hsien 32428, Taiwan, R.O.C.
2. Compal Electronics (China) Co., Ltd.
   Tong Feng East Road, Kunshan, Economic Technical Development Zone, Kunshan, Jiangsu, P. R. China

Remark:
The history of modification as below:
- Modification: 002
- Non-technical change:

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict

2.4	Limited current circuits		P
2.4.2	Frequency (Hz) ..... :	The peak drop voltage was measured with a scope at a 2kΩ resistor. Results see appended table.	—
	Measured current (mA) ..... :	See above.	P
2.4.3	Measured voltage (V) ..... :	>450Vpeak	—
	Measured capacitance (μF) ..... :		N
2.4.4	Measured voltage (V) ..... :	1120Vpeak	—
	Measured charge (μC) ..... :	<45μC	P
2.4.5	Measured voltage (V) ..... :		—
	Measured energy (mJ) ..... :		N
2.4.6	Limited current circuit supplied from or connected to other circuits ..... :		P

1.5.1	TABLE: list of critical components				P
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity[1])
DC/AC Inverter	Line Chang	PK070011600 (LI-2079)	I/P: DC 13.5Vdc, 2.3A max. O/P: 1500Vrms, 7.0mA max.	--	--
- DC/AC inverter transformer (T1, T2)	Line Chang	IT-0076	Class 105°C	--	--
LCD panel	Hyundai	HT17E11-100	17" TFT 1280 X 1024	--	--
[1]) an asterisk indicates a mark which assures the agreed level of surveillance					

2.4	TABLE: limited current circuit measurement				P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
CN4 pin 1 - 2	34.8	17.4	46.43	32.5	at normal condition
CN4 pin 1 – earth	44.8	22.4	44.79	31.35	at normal condition
CN4 pin 2 – earth	18.4	9.2	46.06	32.24	at normal condition

IEC 950			
Clause	Requirement – Test	Result – Remark	Verdict

T1 pin 8 - 13	--	--	--	--	at normal condition, the unit shut down immediately.
CN4 pin 1 - 2	84.2	42.1	94.94	66.46	with C14A short
CN4 pin 1 – earth	--	--	--	--	with C14A short, the unit shut down immediately.
CN4 pin 2 – earth	--	--	--	--	with C14A short, the unit shut down immediately.
CN4 pin 1 - 2	42.4	21.2	44.92	31.44	with D52 short
CN4 pin 1 – earth	32.8	16.4	46.74	32.72	with D52 short
CN4 pin 2 – earth	3.2	1.6	51.34	35.94	with D52 short
CN4 pin 1 - 2	--	--	--	--	with C10 short, the unit shut down immediately.
CN4 pin 1 – earth	--	--	--	--	with C10 short, the unit shut down immediately.
CN4 pin 2 – earth	--	--	--	--	with C10 short, the unit shut down immediately.
CN4 pin 1 - 2	38.2	19.1	41.42	28.99	with L1 short
CN4 pin 1 – earth	38.4	19.2	41.83	29.28	with L1 short
CN4 pin 2 – earth	13.6	6.8	43.89	30.72	with L1 short
CN4 pin 1 - 2	34.4	17.2	46.48	32.53	with Q10 short
CN4 pin 1 – earth	44.2	22.1	44.8	31.36	with Q10 short
CN4 pin 2 – earth	18.0	9.0	46.05	32.24	with Q10 short
Output measured with an 2 kΩ resistor as load.					