the standard in safety

Underwriters Laboratories

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The following material resulting from the investigation under the above numbers is enclosed.

Issue Date	Vol	Sec	Pages	Revised Date
	1		Revised Index Page(s) 1	2008/12/16
2008/12/16	1	7	Add New Proc/Report Sect	

Inspections at your plant will be conducted under the supervision of HANK SU, FIELD SUPERVISOR, UL INSPECTION CENTER LINKOU, UL INTERNATIONAL SERVICE LTD, 260 DA-YEH RD, 4TH FL, PEI TOU DISTRICT, TAIPEI, Taiwan, 112., PHONE: 2-2896-7790, FAX: 1-436-1630, EMAIL: HANK.SU@TW.UL.COM

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to (886-2-2896-7790), referring to the above Project and/or PD Numbers.

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TPI File

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File E307078
Project 08CA54849

December 16, 2008

REPORT

On

COMPONENT - DIRECT PLUG-IN AND CORD CONNECTED CLASS 2 POWER UNITS

Mean Well Enterprises Co., Ltd.
Taipei, Taiwan

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component - Class 2 Power Supply, Models LPV-35-5, LPV-35-12, LPV-35-15, LPV-35-24, LPV-35-36, LPC-35-1050, LPC-35-1400.

USR Component - Class 2 Power Supply, Model LPC-35-700.

ELECTRICAL RATING:

Model	Input			Output	
	V (#)	Hz(#)	A	V dc	A
LPV-35-5	100-240	50/60	1.1	5	5.0
LPV-35-12	100-240	50/60	1.1	12	3.0
LPV-35-15	100-240	50/60	1.1	15	2.4
LPV-35-24	100-240	50/60	1.1	24	1.5
LPV-35-36	100-240	50/60	1.1	36	1.0
LPC-35-700	100-240	50/60	1.1	48	0.7
LPC-35-1050	100-240	50/60	1.1	30	1.05
LPC-35-1400	100-240	50/60	1.1	24	1.4

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USR - Indicates investigation to the United States Standard of Underwriters Laboratories Inc. for Class 2 Power Units, UL 1310, Fifth Edition, last revisions dated July 17, 2008.

CNR - Indicates investigation to Canadian Standard for Power Supplies with Extra-Low-Voltage Class 2 Outputs, CAN/CSA-C22.2 No. 223-M91, Second Edition.

Use - For use only in end-use product where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability - When installed in the end-use equipment, consideration shall be given to the following:

1. These components have been judged on the basis of the required spacings in the Standard for Class 2 Power Units, UL 1310, Par 24, Table 24.2 and UL 840, Table 9.1 under conditions of pollution degree 2 and overvoltage category II, and the Canadian Standard for Power Supplies with Extra-Low-Voltage Class 2 Outputs, CAN/CSA-C22.2 No. 223-M91, Table 3, which would cover the component itself if submitted for unrestricted Listing.

2. These components were intended for use in indoor dry location only.

3. The transformer of the unit employs class 130 (B) insulation.

4. These components shall be installed in compliance with the enclosure and mounting requirements of the ultimate application. The flammability and RTI ratings of enclosure are V-0, 80°C.

5. Input leads, style 1007, 1015, 2464, rated minimum 80°C, minimum 300 V, minimum 20 AWG; or cord type SVT, SVO, rated minimum 75°C, minimum 300 V, minimum 20 AWG. Output leads, style 1007, 1015, 2464, rated minimum 80°C, minimum 300 V, minimum 20 AWG; or cord type SVT, rated minimum 75°C, minimum 300 V, minimum 20 AWG. The suitability of input and output connections shall be determined in each end use application.

6. The temperature measured on outside enclosure are noted as below Table. The necessity of repeated Temperature Test shall be determined in each end use application.

LPV-35-5	LPV-35-12	LPV-35-15	LPV-35-24	LPV-35-36	LPC-35-700	LPC-35-1050	LPC-35-1400
59.5°C	57.1°C	59°C	64.4°C	67.3°C	62.7°C	60.9°C	65.9°C

7. The Leakage Current Test has been valued. The necessity of repeated Leakage Current Test shall be determined in each end use application.

8. The mold stress relief test, strain relief test and impact test were not conducted.

9. These units are only suitable for factory installation only, not suitable for use in permanently-connected end use application.

10. All models are full filled with potting compound, rated V-0, 105°C.

11. The maximum room ambient temperature (Tmra) recommended by manufacturer is 50°C for models LPV-35-5, LPV-35-12, LPV-35-15. 55°C for models LPV-35-24, LPV-35-36, LPC-35-700, LPC-35-1050, LPC-35-1400.

12. Separation requirements for primary input and Class 2 output lead wires should be further considered in end-use application.

CONSTRUCTION DETAILS:

The units shall be constructed in accordance with the following items. See also, Sec. Gen., Construction Details.

Spacings - See Sec. Gen. for details.

Markings - See Sec. Gen., Markings. The following marking shall be additional provided.

The Input polarity "Line", "Neutral" or the equivalent.

The Output polarity "+", "-" or the equivalent.

MODEL LPV-35-5 - FIGS. 1 AND 2

Enclosure - R/C (QMFZ2), Sabic Innovative Plastics. Type 940(f1), any opaque color, rated V-0, minimum 80°C, minimum 1.1 mm thick, Two halves construction, secured together by six tenon. Overall measured 147.7 by 39.7 by 30.4 mm. Provided with four diameter 2.8 mm openings for Input and Output Leads. See ILL. 1 for detailed dimensions.

Input Leads - R/C (AVLV2), CSA Certified, style 1007, 1015 or 2464, rated minimum 80°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.

Alternate - Input cords, Listed (ZJCZ/7), type SVT or SVO, rated minimum 75°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.

Output Leads - R/C (AVLV2), CSA Certified, style 1007, 1015 or 2464, rated minimum 80°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.

Alternate - Output cords, Listed (ZJCZ/7), type SVT, rated minimum 75°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.

Potting Compound - R/C (QMFZ2), Dow Corning Corp. (E40195), Type Sylgard 160, rated V-0, 105°C, minimum 1.5 mm thick.

Printed Wiring Board - R/C (ZPMV2), rated minimum V-0, minimum 130°C. See ILL. 2 for component and trace layout.

Fuse (FS1) - Listed (JDYX/7), rated 2.5 A, 250 V.

X-Capacitor (C1) - Line-to-Neutral, rated 250 V ac, maximum 0.68 µF. See below table for manufacturers.

Manufacturer		Type
Arcotronics SPA (E97797)	R/C (FOWX2/8)	R.46 or R.49
Epcos Electronic Components SA (E97863)	R/C (FOWX2/8)	B3292
Iskra Kondenzatorji D D (E145156)	R/C (FOWX2/8)	KNB1530, KNB1560
Low Gu Electronics Industry Co Ltd (E186321)	R/C (FOWX2/8)	GS-L
Pilkor Electronics Co Ltd (E165646)	R/C (FOWX2/8)	PCX2 335M, PCX2 337, PCX2 335
Ultra Tech Xiphi Enterprise Co Ltd (E183780)	R/C (FOWX2/8)	HQX
Vishay BC Components BV	R/C (FOWX2/8)	339
Cheng Tung Industrial Co Ltd (E193049)	R/C (FOWX2/8)	CTX
Shiny Space Enterprise Co Ltd (E186561)	R/C (FOWX2/8)	SX1

Bleeder Resistors (R1, R2) - Rated 680 kohm, minimum 0.25 W.

Choke (LF1) - Open-type construction, Core: Ferrite, measured overall 20 mm by 14 mm by 4.5 mm. See ILL. 3 for models details.

Y-Capacitors (C3, C4) - Primary-to-Secondary, rated maximum 470 pF, 250 V ac. See below table for manufacturers.

Manufacturer		Type
Murata MFG Co Ltd (E37921)	R/C (FOWX2), CSA Certified	KX
Walsin Technology Corp (E146544)	R/C (FOWX2/8)	AH
TDK Corp (E37861)	R/C (FOWX2), CSA Certified	CD
Welson Industrial Co Ltd (E104572)	R/C (FOWX2/8)	WD

Internal Wiring - Only when Capacitors (C3, C4) provided. R/C (AVLV2/8), rated minimum 300 V, minimum 80°C, minimum No. 20 AWG, connecting F1A and F1B, secured to PWB by soldering. Overall sleeved with tubing, see Sec. Gen. Tubing for details.

Bridge Rectifier (BD1) - Silicon rectifier type, rated minimum 500 V, minimum 4 A.

Capacitor (C5) - Electrolytic, type with integral relief, rated minimum 400 V, minimum 100 µF, 105 °C.

Transistor (Q1) - Rated minimum 500 V, minimum 2 A.

Resistor (R41) - Rated minimum 150 Kohm, minimum 0.125 W.

Resistor (R42) - Rated minimum 0.47 ohm, minimum 2 W.

Diode (D100) - Silicon rectifier type, rated minimum 15 A, 45 V.

Capacitors (C105, C106) - Electrolytic, type with integral relief, rated minimum 10 V, maximum 2200 µF, 105 °C.

Y-Capacitor (C31) - Optional, Primary-to-Secondary, rated maximum 2200 pF, minimum 250 V ac.

Manufacturer		Type
Murata MFG Co Ltd (E37921)	R/C (FOWX2), CSA Certified	KX
Walsin Technology Corp (E146544)	R/C (FOWX2/8)	AH
TDK Corp (E37861)	R/C (FOWX2), CSA Certified	CD
Welson Industrial Co Ltd (E104572)	R/C (FOWX2/8)	WD

Optical Isolators (U2, U3) - Primary-to-Secondary, rated isolation voltage 5000 V ac.

Manufacturer		Type
Sharp Corp. Electronic Components and Devices Group (E64380)	R/C (FPQU2), CSA Certified	PC123
Cosmo Electronics Corp (E169586)	R/C (FPQU2/8)	K1010
Lite-On Technology Corp (E113898)	R/C (FPQU2/8)	LTV-817
NEC Electronics Corp. Compound Semiconductor Device Div (E72422)	R/C (FPQU2), CSA Certified	PS2562-1
Isocom Ltd (E250824)	R/C (FPQU2), CSA Certified	ISP621, ISP817X

Transformer (T1) - R/C, (OBJY2), Long Sail Electronic Co. Ltd., (E150436), Class 130 (B), designated SBI4.2. Constructed as follow:

A. Core - Ferrite core, E-E type, core measured 30.0 by 30.0 by 7.05 mm thick.

B. Bobbin - R/C (QMFZ2), Sumitomo Bakelite Co. Ltd. (E41429), Type PM-9820, black color, rated V-0, 150°C, 0.9 mm thick or Type PM-9630, black color, rated V-0, 150°C.

C. Windings - Enameled copper magnet wire, R/C (OBMW2), rated minimum 130°C, random wound. See ILL. 4 for winding and insulation details.

D. Insulation Tape - R/C (OANZ2), 3M Company Electrical Markets DIV (EMD) (E17385), Type 1350F-1, 1350-1, 1350T-1 rated 130°C.

Alternate - R/C (OANZ2), Symbio Inc. (E50292), Type 35660Y, 35660, rated 130°C.

Alternate - R/C (OANZ2), Bondtec Pacific Co., Ltd. (E175868), Type 370S, rated 130°C.

E. Margin Tape - R/C (OANZ2), Polyester, 3M Company Electrical Markets DIV (EMD) (E17385), Type 44D-A, 44T-A, rated 130°C. Minimum 3 mm wide provided between primary and secondary.

Alternate - Same as above, except Bondtec Pacific Co., Ltd. (E175868), Type 201, rated 130°C.

Alternate - Same as above, except Symbio Inc. (E50292), Type 35661, rated 130°C.

F. Insulation Tubing - R/C (YDPU2), Great Holding Industrial Co., Ltd. (E156256), Type TFT, rated 200°C.

Alternate - Same as above, except Zeus Industrial Products Inc. (E64007), Type TFE-TW-300, rated 200°C.

G. Varnish - R/C (OBOR2), John C Dolph Co., Ltd. (E317427), type BC-346A, rated minimum 130°C.

Alternate - Same as above, except Hitachi Chemical Co., Ltd. (E72979), Type WP-2952F-2G, rated 130°C.

Alternate - Same as above, except P D George/Viking (E73071), Type 468-2-7(++), 468-2(+), or 468-2FC(+), rated 130°C.

Alternate - Same as above, except Kyocera Chemical Corp. (E83702), Type TVB2180T++, rated 130°C.

Alternate Transformer - Same as above except for R/C (OBJY2), Jet Signal Industries Co., Ltd. (E213679), Designated SBI4.2.

Alternate Transformer - Same as above except for R/C (OBJY2), Ten Well Industrial Ltd. (E204969), Designated SBI4.2.

MODELS LPV-35-12, LPV-35-15, LPV-35-24, LPV-35-36

General - Models LPV-35-12, LPV-35-15, LPV-35-24, LPV-35-36 are similar to Model LPV-35-5 described in Fig. 1 and Fig. 2 except as note below:

Resistor (R41) - Rated minimum described as below.

Model	LPV-35-12	LPV-35-15	LPV-35-24	LPV-35-36
Minimum Rating	180 Kohm, 0.125 W.	200 Kohm, 0.125 W.	200 Kohm, 0.125 W.	180 Kohm, 0.125 W.

Diode (D100) - Rated minimum described as below.

Model	LPV-35-12	LPV-35-15	LPV-35-24	LPV-35-36
Minimum Rating	100 V, 20 A	150 V, 10 A	200 V, 10 A	400 V, 10 A

Capacitor (C105, C106) - Electrolytic, rated minimum described as below.

Model	Minimum Rating
LPV-35-12	16 V, 1000 µF, 105 °C
LPV-35-15	25 V, 470 µF, 105 °C
LPV-35-24	35 V, 330 µF, 105 °C
LPV-35-36	50 V, 220 µF, 105 °C, C106 not provided

Transformer (T1) - Windings and insulation, described as below.

Model	Windings and insulation
LPV-35-12	See ILL. 5 for winding and insulation details
LPV-35-15	
LPV-35-24	See ILL. 6 for winding and insulation details
LPV-35-36	See ILL. 7 for winding and insulation details

MODELS LPC-35-700 - FIGS. 3 AND 4

Enclosure -R/C (QMFZ2), Sabic Innovative Plastics, Type 940(f1), any opaque color, rated V-0, minimum 80°C, minimum 1.1 mm thick, Two halves construction, secured together by six tenon. Overall measured 147.7 by 39.7 by 30.4 mm. Provided with four diameter 2.8 mm openings for Input and Output Leads. See ILL. 1 for detailed dimensions.

Input Leads - R/C (AVLV2), CSA Certified, style 1007, 1015 or 2464, rated minimum 80°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.

Alternate - Input cords, Listed (ZJCZ/7), type SVT or SVO, rated minimum 75°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.

Output Leads - R/C (AVLV2), CSA Certified, style 1007, 1015 or 2464, rated minimum 80°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.

Alternate - Output cords, Listed (ZJCZ/7), type SVT, rated minimum 75°C, minimum 300 V, minimum No. 20 AWG. Secured to PWB by soldering.
Potting Compound - R/C (QMFZ2), Dow Corning Corp. (E40195), Type Sylgard 160, rated V-0, 105°C, minimum 1.5 mm thick.

Printed Wiring Board - R/C (ZPMV2), rated minimum V-0, minimum 130°C. See ILL. 8 for component and trace layout.

Fuse (FS1) - Listed (JDYX/7), rated 2.5 A, 250 V.

X-Capacitor (C1) - Line-to-Neutral, R/C (FOWX2/8), rated 250 V ac, maximum 0.68 µF. See below table for manufacturers.

Manufacturer		Type
Arcotronics SPA (E97797)	R/C (FOWX2/8)	R.46 or R.49
Epcos Electronic Components SA (E97863)	R/C (FOWX2/8)	B3292
Iskra Kondenzatorji D D (E145156)	R/C (FOWX2/8)	KNB1530, KNB1560
Low Gu Electronics Industry Co Ltd (E186321)	R/C (FOWX2/8)	GS-L
Pilkor Electronics Co Ltd (E165646)	R/C (FOWX2/8)	PCX2 335M, PCX2 337, PCX2 335
Ultra Tech Xiphi Enterprise Co Ltd (E183780)	R/C (FOWX2/8)	HQX
Vishay BC Components BV	R/C (FOWX2/8)	339
Cheng Tung Industrial Co Ltd (E193049)	R/C (FOWX2/8)	CTX
Shiny Space Enterprise Co Ltd (E186561)	R/C (FOWX2/8)	SX1

Bleeder Resistors (R1, R2) - Rated 680 kohm, minimum 0.25 W.

Choke (LF1) - Open-type construction, Core: Ferrite, measured overall 20 mm by 14 mm by 4.5 mm. See ILL. 9 for models details.

Y-Capacitors (C3, C4) - Primary-to-Secondary, rated maximum 470 pF, 250 V ac. See below table for manufacturers.

Manufacturer		Type
Murata MFG Co Ltd (E37921)	R/C (FOWX2), CSA Certified	KX
Walsin Technology Corp (E146544)	R/C (FOWX2/8)	AH
TDK Corp (E37861)	R/C (FOWX2), CSA Certified	CD
Welson Industrial Co Ltd (E104572)	R/C (FOWX2/8)	WD

Bridge Rectifier (BD1) - Silicon rectifier type, rated minimum 500 V, minimum 4 A.

Capacitor (C5) - Electrolytic, type with integral relief, rated minimum minimum 400 V, minimum 100 µF, 105 °C.

Transistor (Q1) - Rated minimum 500 V, minimum 2 A.

Resistor (R42) - Rated minimum 0.56 ohm, minimum 2 W.

Diode (D100) - Silicon rectifier type, rated minimum 20 A, maximum 600 V.

Capacitor (C105) - Electrolytic, type with integral relief, rated minimum 10 V, Maximum 2200 µF, 105 °C.

IC (U100) - Type AP4310.

Y-Capacitor (C31) - Optional, Primary-to-Secondary, rated maximum 2200 pF, 250 V ac.

Manufacturer		Type
Murata MFG Co Ltd (E37921)	R/C (FOWX2), CSA Certified	KX
Walsin Technology Corp (E146544)	R/C (FOWX2/8)	AH
TDK Corp (E37861)	R/C (FOWX2), CSA Certified	CD
Welson Industrial Co Ltd (E104572)	R/C (FOWX2/8)	WD

Optical Isolators (U2)- Primary-to-Secondary, rated isolation voltage 5000 V ac.

Manufacturer		Type
Sharp Corp. Electronic Components and Devices Group (E64380)	R/C (FPQU2), CSA Certified	PC123
Cosmo Electronics Corp (E169586)	R/C (FPQU2/8)	K1010
Lite-On Technology Corp (E113898)	R/C (FPQU2/8)	LTV-817
NEC Electronics Corp. Compound Semiconductor Device Div (E72422)	R/C (FPQU2), CSA Certified	PS2562-1
Isocom Ltd (E250824)	R/C (FPQU2), CSA Certified	ISP621, ISP817X

Transformer (T1) - R/C, (OBJY2), Long Sail Electronic Co. Ltd., (E150436), Class 130 (B), designated SBI4.2. Constructed as follow:

A. Core - Ferrite core, E-E type, core measured 30.0 by 30.0 by 7.05 mm thick.

B. Bobbin - R/C (QMFZ2), Sumitomo Bakelite Co. Ltd. (E41429), Type PM-9820, black color, rated V-0, 150°C, 0.9 mm thick or Type PM-9630, black color, rated V-0, 150°C.

C. Windings - Enameled copper magnet wire, R/C (OBMW2), rated minimum 130°C, random wound. See ILL. 10 for winding and insulation details.

D. Insulation Tape - R/C (OANZ2), 3M Company Electrical Markets DIV (EMD) (E17385), Type 1350F-1, 1350-1, 1350T-1 rated 130°C.

Alternate - R/C (OANZ2), Symbio Inc. (E50292), Type 35660Y, 35660, rated 130°C.

Alternate - R/C (OANZ2), Bondtec Pacific Co., Ltd. (E175868), Type 370S, rated 130°C.

E. Margin Tape - R/C (OANZ2), Polyester, 3M Company Electrical Markets DIV (EMD) (E17385), Type 44D-A, 44T-A, rated 130°C. Minimum 3 mm wide provided between primary and secondary.

Alternate - Same as above, except Bondtec Pacific Co., Ltd. (E175868), Type 201, rated 130°C.

Alternate - Same as above, except Symbio Inc. (E50292), Type 35661, rated 130°C.

F. Insulation Tubing - R/C (YDPU2), Great Holding Industrial Co., Ltd. (E156256), Type TFT, rated 200°C.

Alternate - Same as above, except Zeus Industrial Products Inc. (E64007), Type TFE-TW-300, rated 200°C.

G. Varnish - R/C (OBOR2), John C Dolph Co., Ltd. (E317427), type BC-346A, rated minimum 130°C.

Alternate - Same as above, except Hitachi Chemical Co., Ltd. (E72979), Type WP-2952F-2G, rated 130°C.

Alternate - Same as above, except P D George/Viking (E73071), Type 468-2-7(++), 468-2(+), 468-2FC(+), rated 130°C.

Alternate - Same as above, except Kyocera Chemical Corp. (E83702), Type TVB2180T++, rated 130°C.

Alternate Transformer - Same as above except for R/C (OBJY2), Jet Signal Industries Co., Ltd. (E213679), Designated SBI4.2.

Alternate Transformer - Same as above except for R/C (OBJY2), Ten Well Industrial Ltd. (E204969), Designated SBI4.2.

MODELS LPC-35-1050, LPC-35-1400

General - Models LPC-35-1050, LPC-35-1400 are similar to Model LPC-35-700 described in Fig. 3 and Fig. 4 except as note below:

Diode (D100) - Rated minimum described as below.

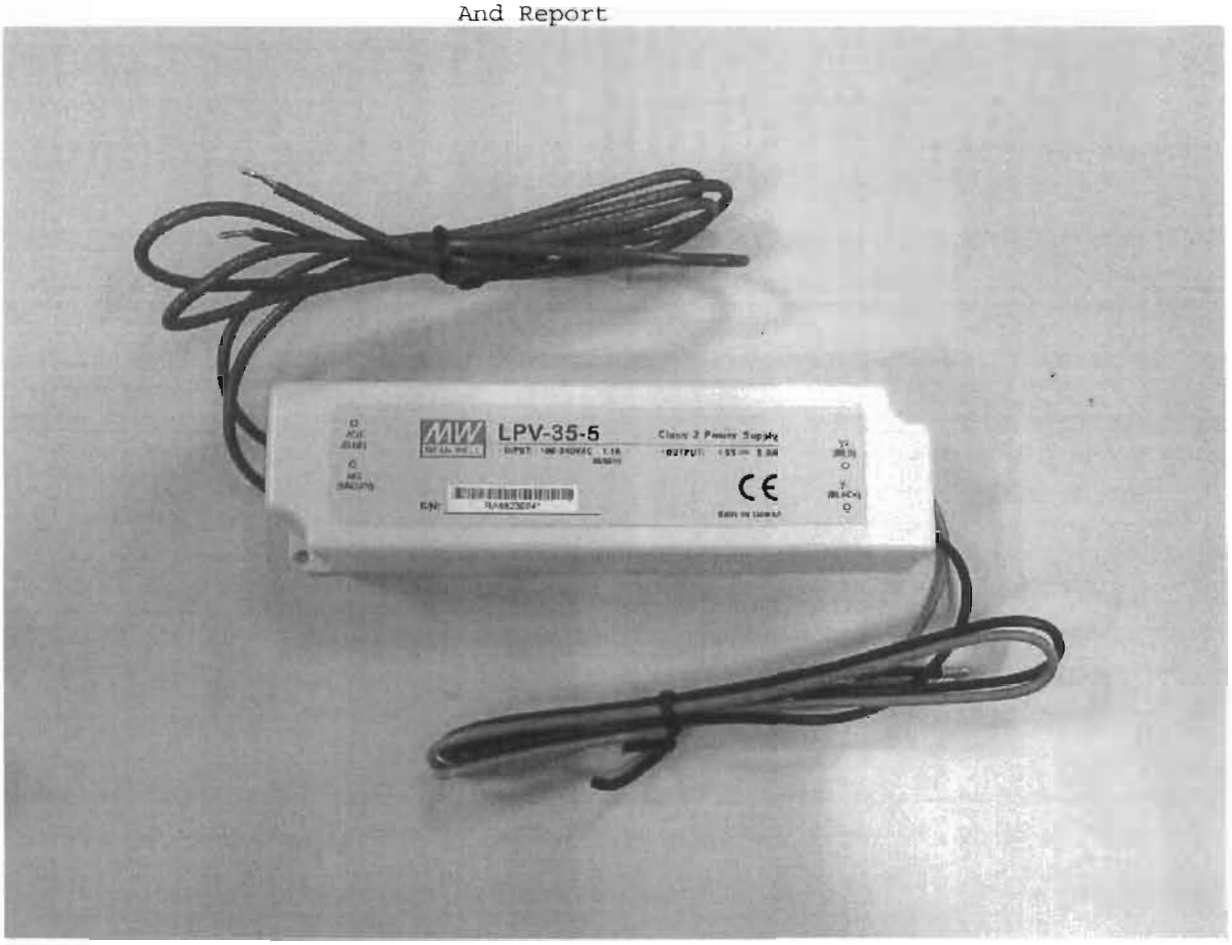
Model	Minimum Rating
LPC-35-1050	400 V, 10 A
LPC-35-1400	200 V, 10 A

Capacitor (C105) - Electrolytic, rated minimum described as below.

Model	Minimum Rating
LPC-35-1050	50 V, 220 µF, 105 °C
LPC-35-1400	35 V, 470 µF, 105 °C

Transformer (T1) - Windings and insulation, described as below.

Model	Windings and insulation
LPC-35-1050	See ILL. 11 for winding and insulation details
LPC-35-1400	



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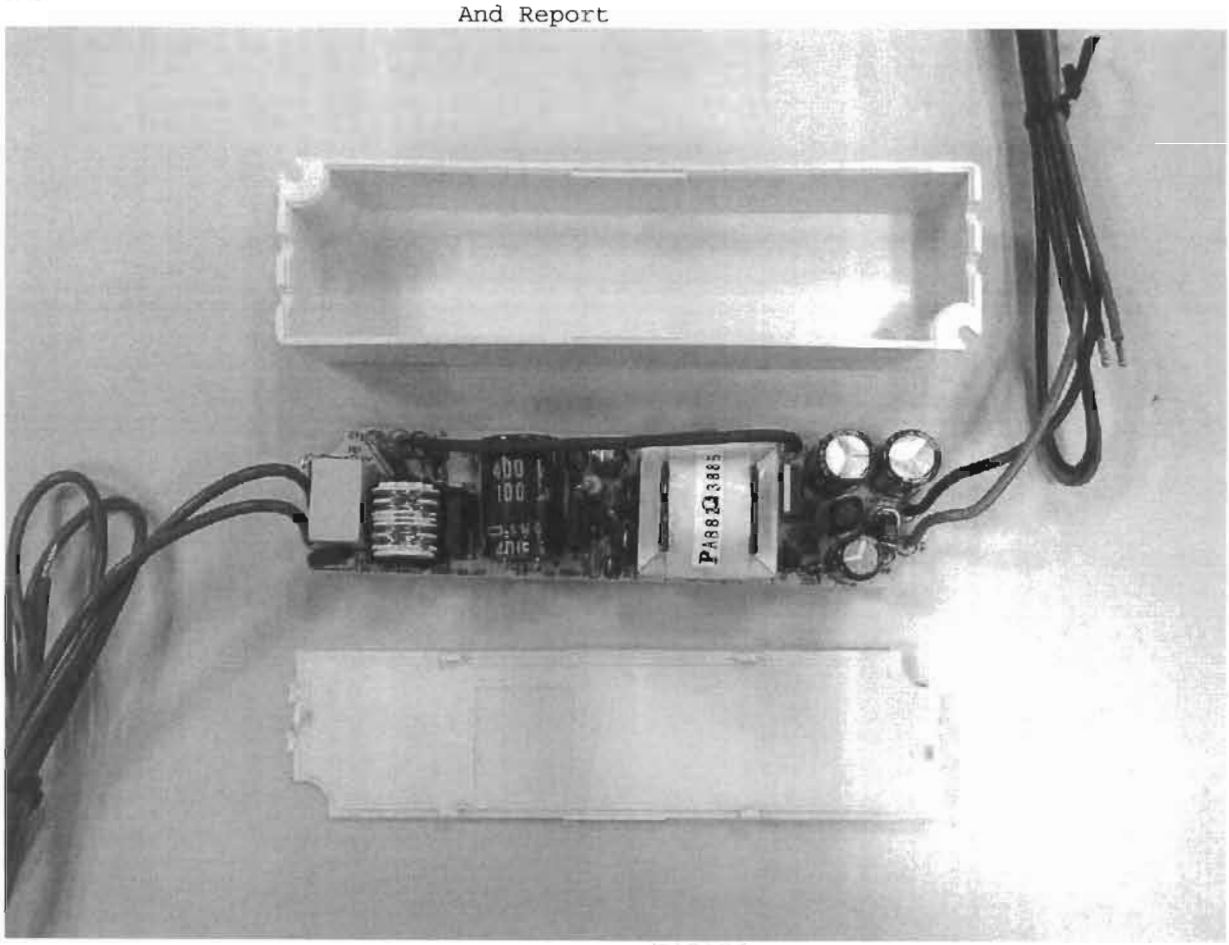

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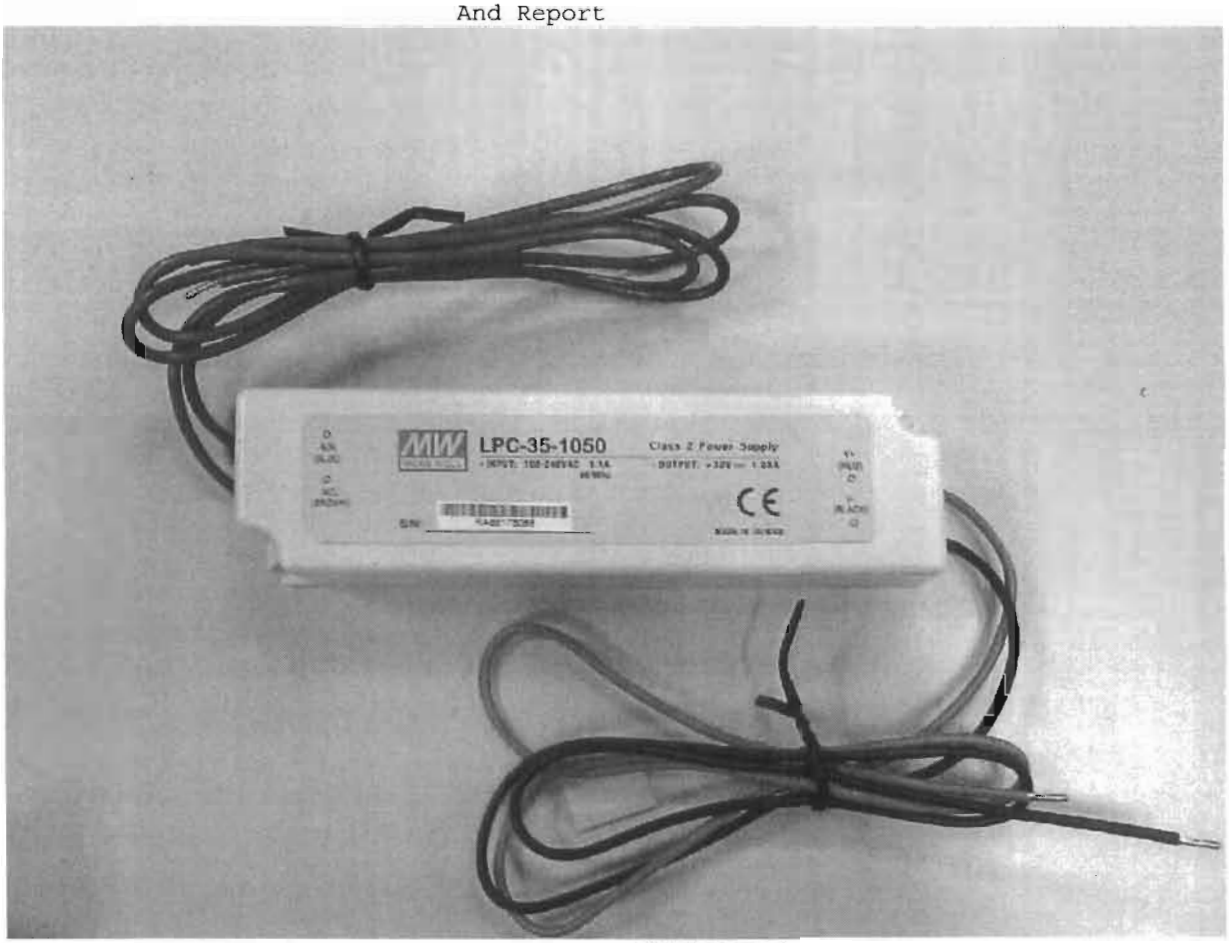

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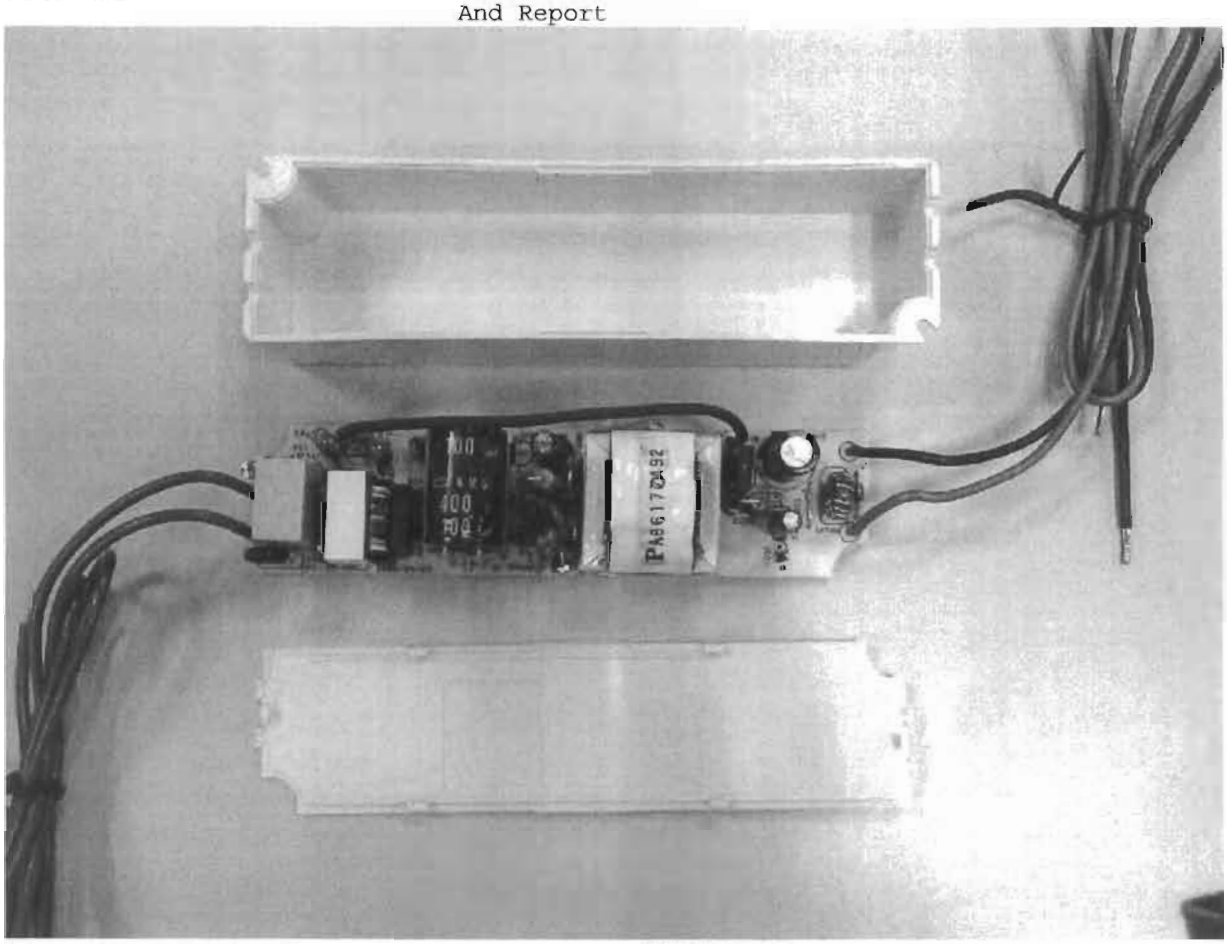

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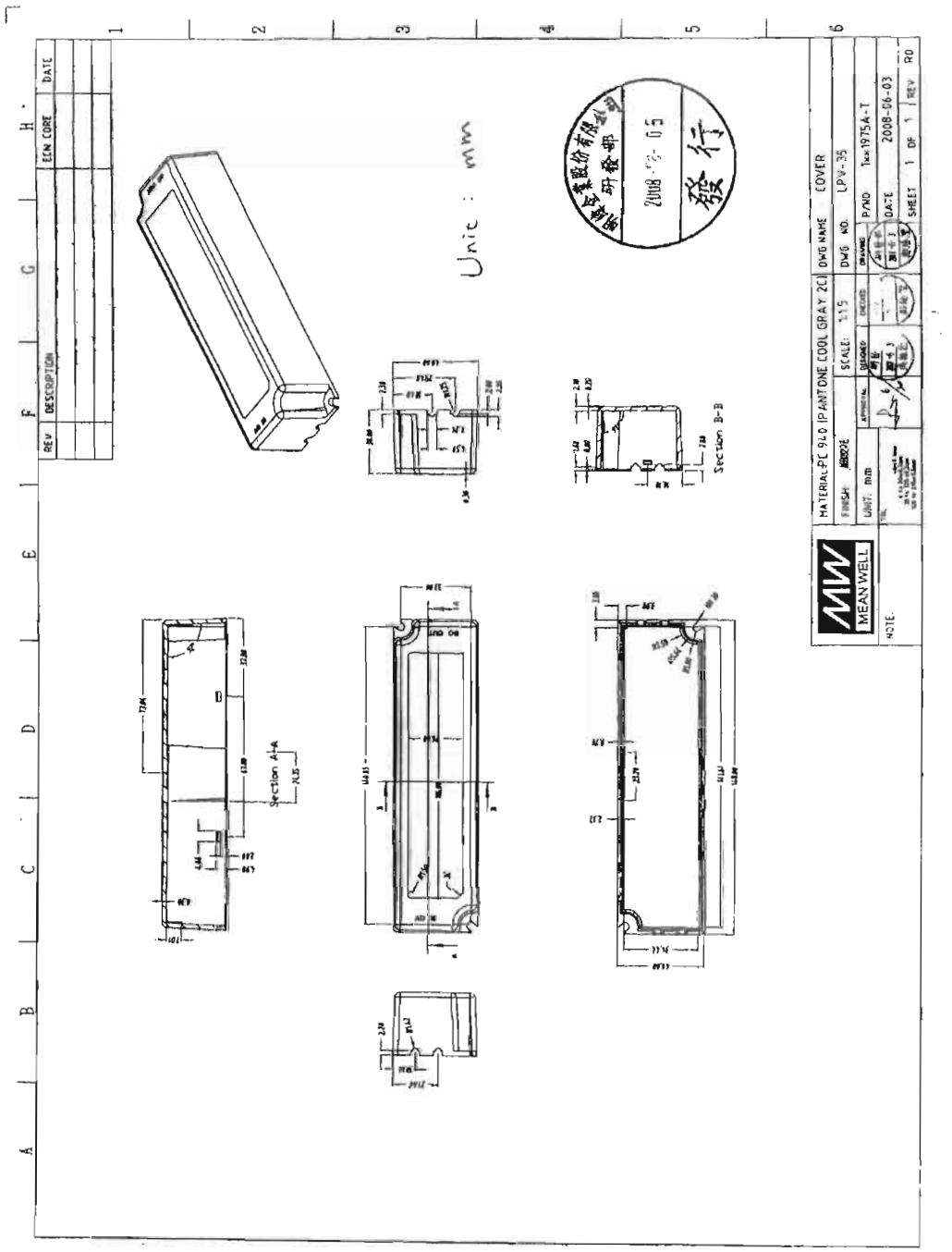
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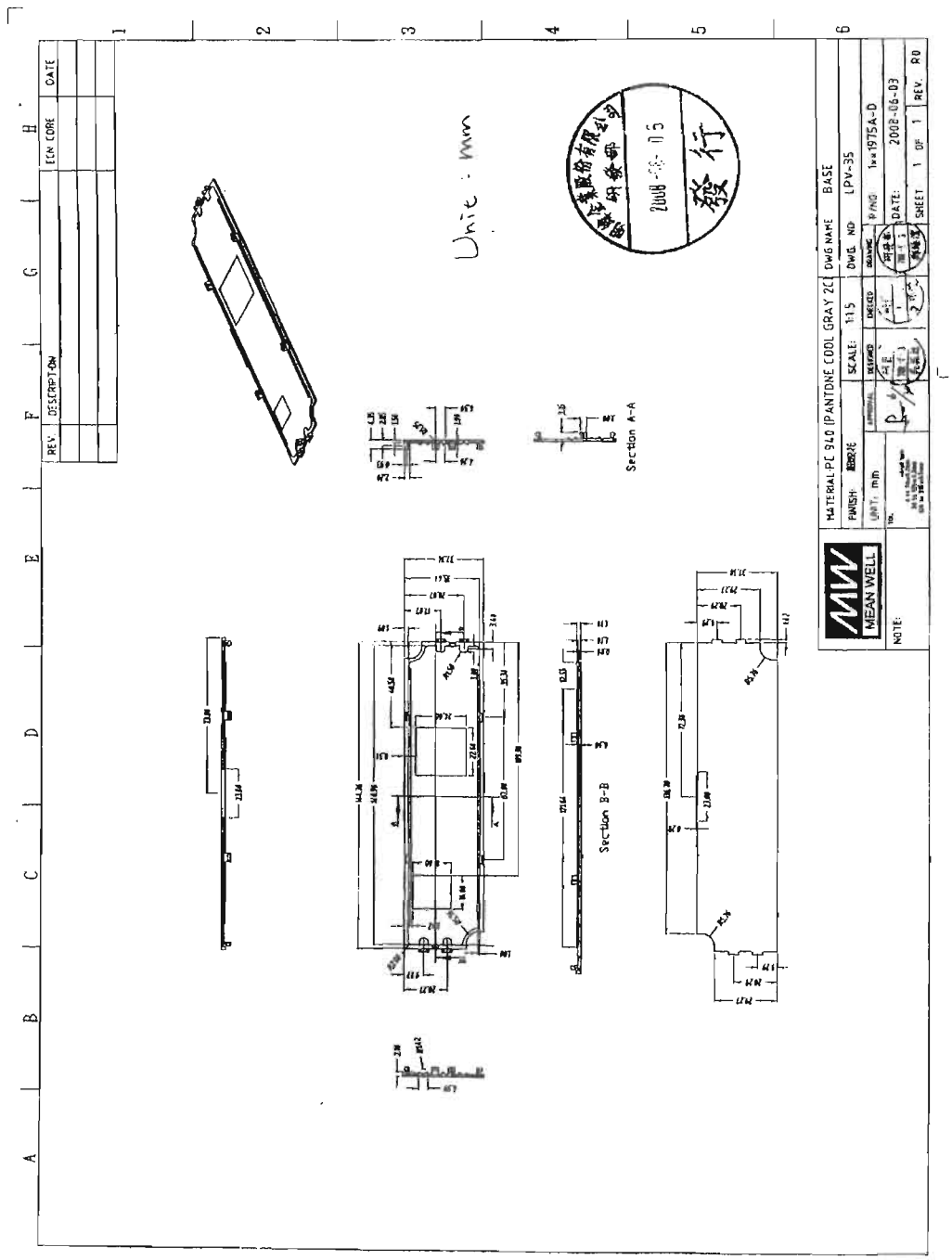
COVER
LPV-35
2008-06-03

N080495154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UNIT: mm
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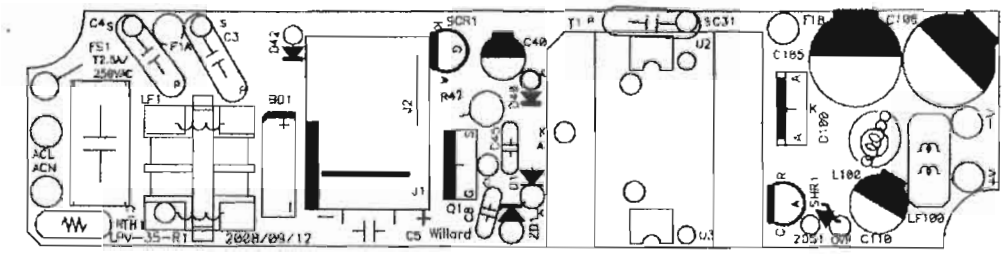
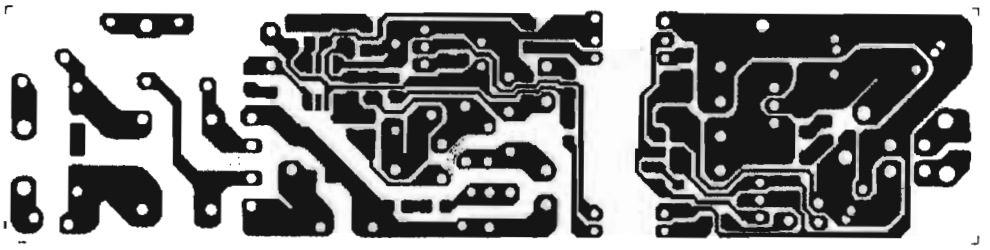
DWG NAME: BASE
P/NO: 1pc 1975A-D
DATE: 2008-06-03
SHEET 1 OF 1
REV: R0
NOTE:
REV.
DESCRIPTION
ECN CODE
DATE

N080495154

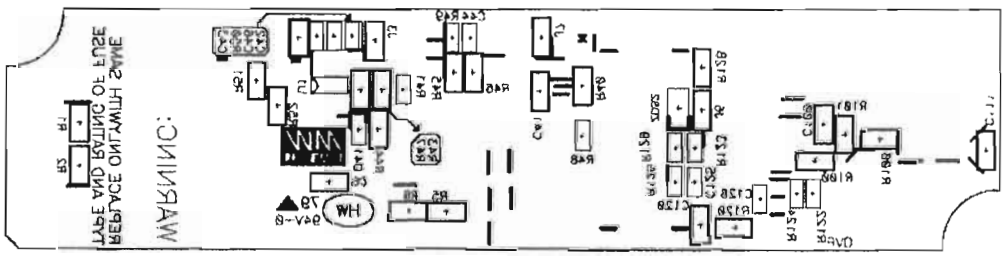
MODEL GEPS LPV-35-5



LAYER: TOP-SILK



LAYER: BOT-SOLDER



LAYER: BOT-SILK

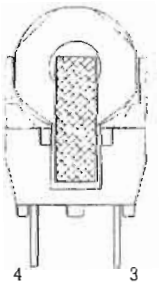
TEN WELL INDUSTRIAL LIMITED

SPECIFICATION FOR APPROVAL

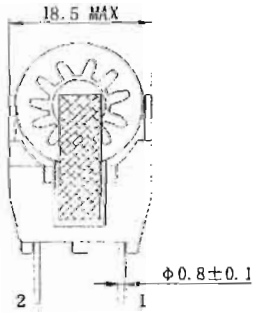
CUSTOMER NAME	广州铭纬	CUSTOMER P/N	LF-158A	REV	
TWI P/N	892195g	REV	A	DATE	2008-10-13

MECHANICAL DIMENSION（UNIT: mm）

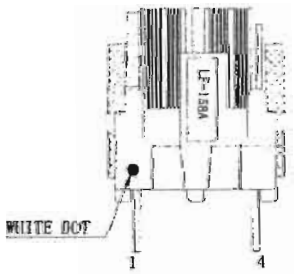
SIDE VIEW



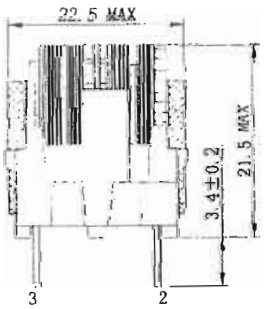
SIDE VIEW



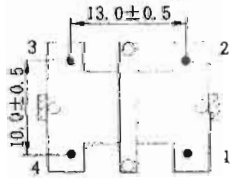
FRONT VIEW



FRONT VIEW



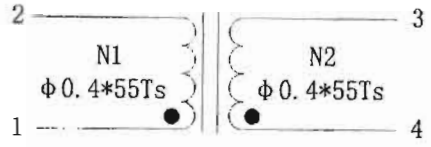
BOTTOM VIEW



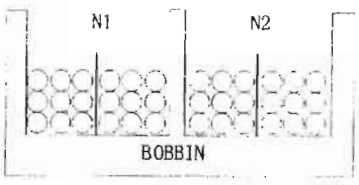
TEN WELL INDUSTRIAL LIMITED
SPECIFICATION FOR APPROVAL

CUSTOMER NAME	广州铭纬	CUSTOMER P/N	LF-158A	REV	
TWI P/N	892195g	REV	A	DATE	2008-10-13

SCHEMATIC DRAWING:



WINDING ORDER:



NOTE:圈数为参考值≤63Ts

" ● " STAND FOR START

ELECTRICAL CHARACTERISTIC:

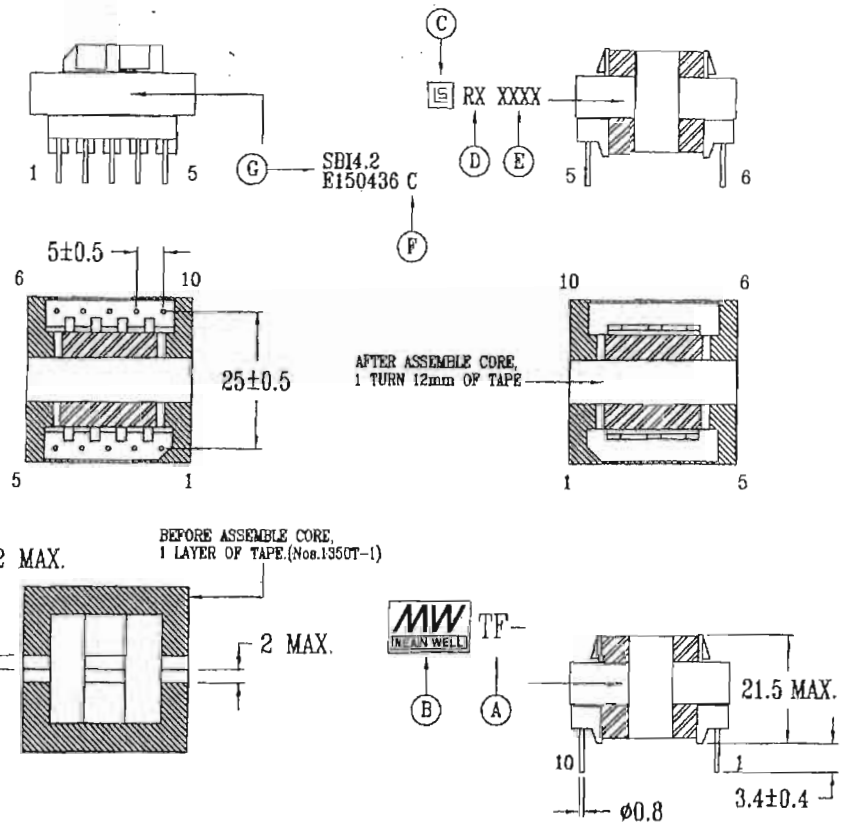
INDUCTANCE:		
L(1-2)&(4-3)	8.5mH MIN	AT 1KHZ 0.25V
DCR:		
R(1-2)&(4-3)	318mΩ MAX	AT 25℃
HI-POT:		
COIL TO CORE	2.0KVAC	AT 1mA 1Sec
INSULATION RESISTANCE:		
COIL TO COIL	100MΩ MIN	AT 500VDC
COIL TO CORE	100MΩ MIN	AT 500VDC

MATERIAL LIST:

ITEM	MATERIAL	SUPPLIER	UL No.
CORE	UT20 MA120 R12K	KAWATETSU VAKOS	
BASE	PHENOLIC MOLDING ENAMELED T375J 94V-0	CHANG CHUN PLASTICS CO.,LTD	E59481(S)
BOBBIN	PBT 4115 94V-0	CHANG CHUN PLASTICS CO.,LTD	E59481(S)
WIRE	POLYURETHANE ENAMELED COPPER WIRE UEW/U	PACIFIC ELECTRONIC WIRE & CABLE CO.,LTD	E201757
VARNISH	BC-346A	JOHN C DOLPH CO	E76517(M)

N080495160

1.DIMENSIONS:

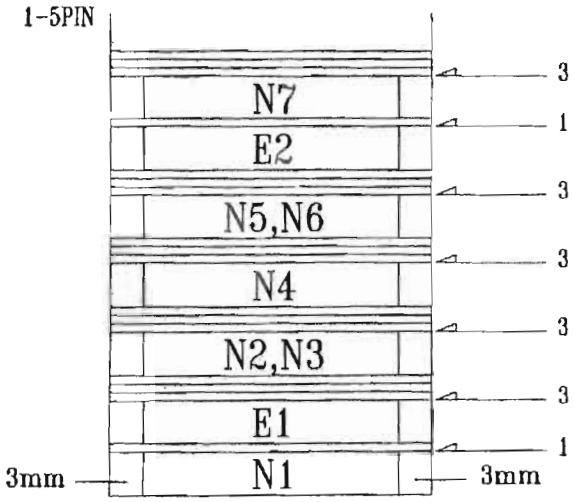


A. PART NO.: TF-1790~TF-1794
B. CUSTOMER'S MARK
C. THE MARK IS VENDER'S TRADE MARK
D. NUMBER OF THE EDITION
E. THE DATE (YEAR & WEEK) OF PRODUCTION
F. MANUFACTURER PLACE : CHINA
G. CLASS 130 (B) TRANSFORMER INSULATION SYSTEM DESIGNATED SBI4.2 FILE E150436
REMARKS:
1. GAP OF E CORE ASSEMBLE FROM THE 1-5PIN SIDE, THEN WRAPPING 2 TURNS OF TAPE .
2. THE PIN 6 MUST BE REMOVED.
3. THE PIN 3 MUST BE CUT OFF AFTER PIN DIPPED.

LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1790~TF-1794
APPROVED	CHECKED	DRAWN	mm	DESCRIPTION: EE-30
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

2.SCHEMATIC:

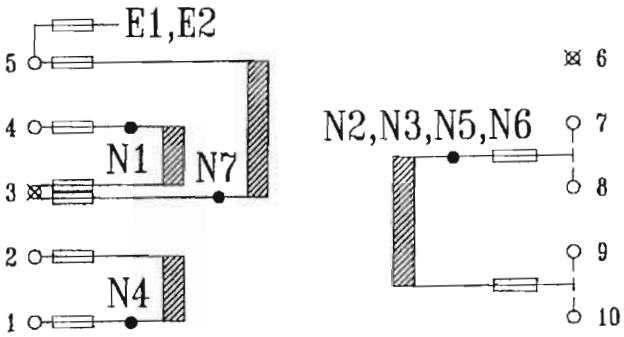
TAPE LAYERS



BOBBIN

WINDINGS

TEFLON TUBE



PRIMARY

SECONDARY

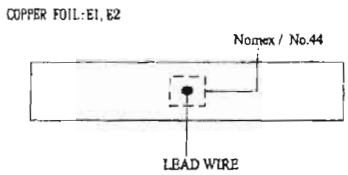
LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1790 DESCRIPTION: EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.Ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 900uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	7,8 – 9,10	0.55	6		10 mΩ MAX.
N3	7,8 – 9,10	0.55	6		
N4	1 – 2	0.3	12		201 mΩ MAX.
N5	7,8 – 9,10	0.55	6		
N6	7,8 – 9,10	0.55	6		
E2	5	1/1000"	1.1		
N7	3 – 5	0.4	24		273 mΩ MAX.

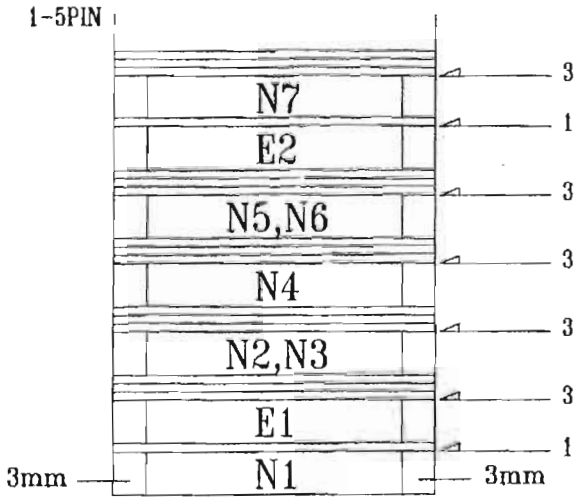
NOTE:

1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)



LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1790 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

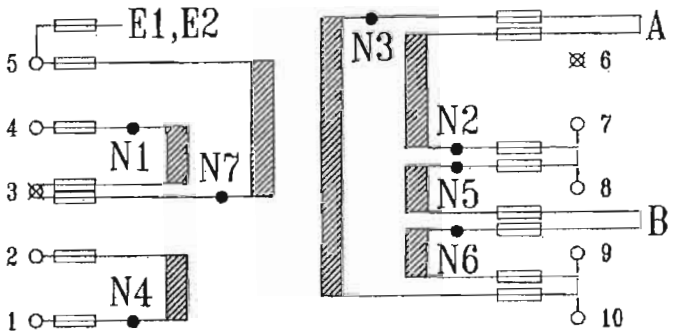
2.SCHEMATIC: TAPE LAYERS



BOBBIN

WINDINGS

TEFLON TUBE



PRIMARY SECONDARY

LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1791,TF-1792 DESCRIPTION: EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

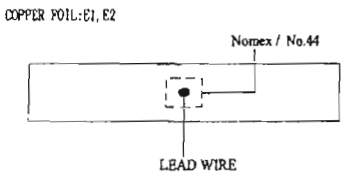
N080495166

3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 850uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	7,8 – A	0.55	7		(7,8 –9,10) : 34 mΩ MAX.
N3	A – 9,10	0.55	6		
N4	1 – 2	0.3	12		201 mΩ MAX.
N5	7,8 – B	0.55	7		(7,8 –9,10) : 34 mΩ MAX.
N6	B – 9,10	0.55	6		
E2	5	1/1000"	1.1		
N7	3 – 5	0.4	24		273 mΩ MAX.

NOTE:

1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)



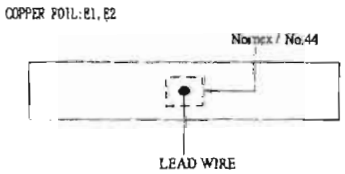
LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1791 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	Willen APR.30.08	APR.30.08	DATE APR.30 2008	for Model : LPV-35-12

3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.Ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 850uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	7,8 – A	0.55	9		(7,8 –9,10) : 44 mΩ MAX.
N3	A – 9,10	0.55	8		
N4	1 – 2	0.3	12		201 mΩ MAX.
N5	7,8 – B	0.55	9		(7,8 –9,10) : 44 mΩ MAX.
N6	B – 9,10	0.55	8		
E2	5	1/1000"	1.1		
N7	3 – 5	0.4	24		273 mΩ MAX.

NOTE:

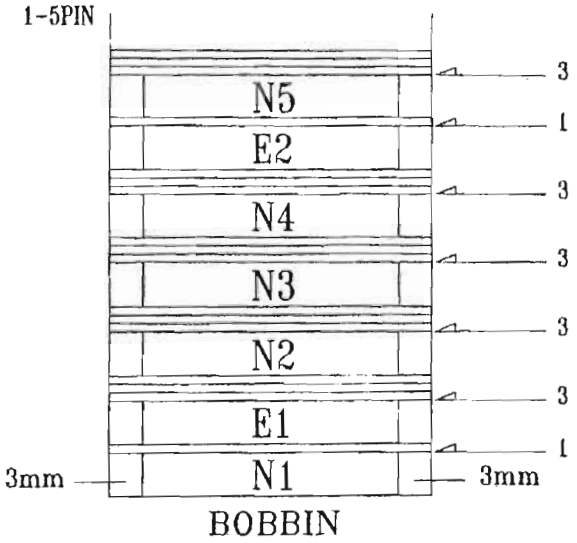
1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)



LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1792 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30,08	APR-30-08	DATE APR.30 2008	for Model : LPV-35-15

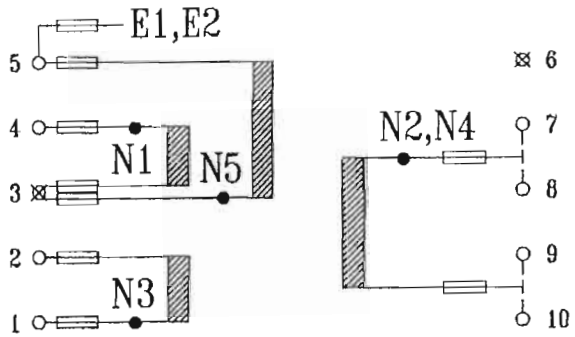
2.SCHEMATIC:

TAPE LAYERS



WINDINGS

TEFLON TUBE



LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1793 DESCRIPTION: EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR-30-08	DATE APR.30 2008	

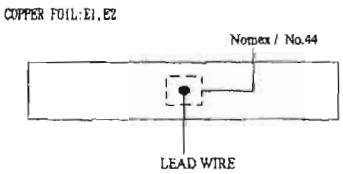
N080495170

3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.Ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 850uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	7,8 – 9,10	0.4	25		110mΩ MAX.
N3	1 – 2	0.3	12		192mΩ MAX.
N4	7,8 – 9,10	0.4	25		
E2	5	1/1000"	1.1		
N5	3 – 5	0.4	24		259mΩ MAX.

NOTE:

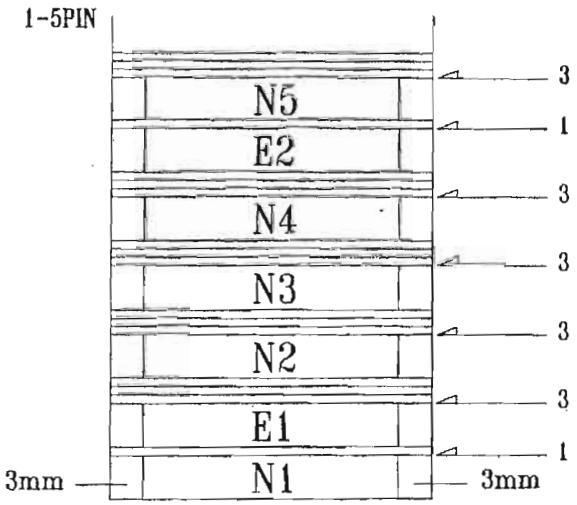
1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)



LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1793 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

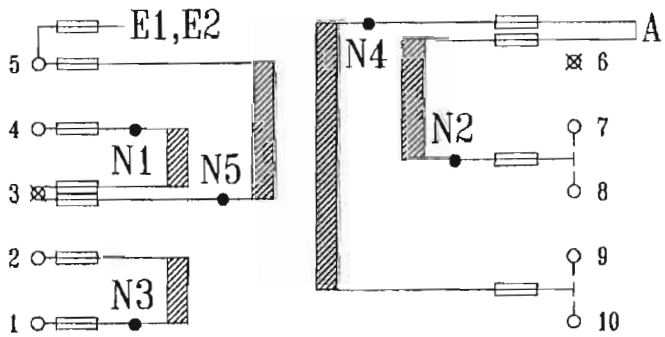
2.SCHEMATIC:

TAPE LAYERS



WINDINGS

TEFLON TUBE



PRIMARY

SECONDARY

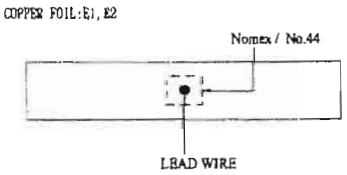
LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1794 DESCRIPTION: EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.Ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 900uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	7,8 – A	0.4	17		(7,8 –9,10) : 294 mΩ MAX.
N3	1 – 2	0.3	12		187 mΩ MAX.
N4	A – 9,10	0.4	17		
E2	5	1/1000"	1.1		
N5	3 – 5	0.4	24		259 mΩ MAX.

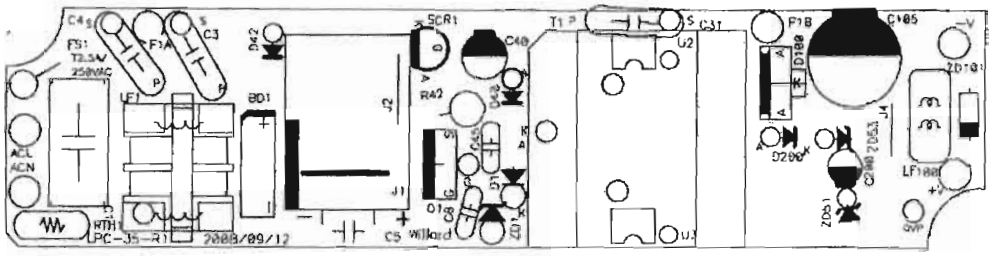
NOTE:

1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)

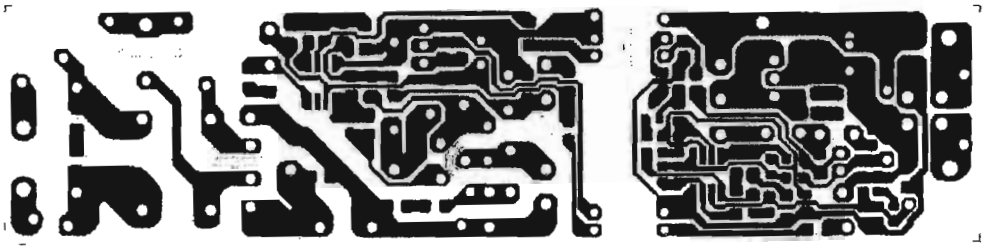


LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1794 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.2008	APR-30.08	DATE APR.30 2008	

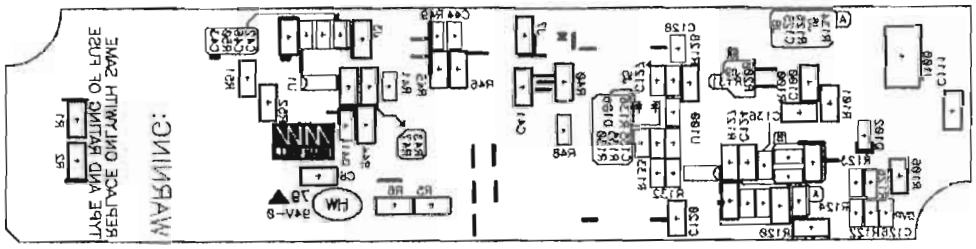
MODELS LPC-35-700



LAYER: TOP-SILK



LAYER: BOT-SOLDER



LAYER: BOT-SILK

YUJING

SPECIFICATION

.CUSTOMER	明 邦	PART NO.	LF-852	DESCRIPTION		OTC-19 V/4S	
MODEL NO.	OTC19B73	DATE	2008-10-06	REV.	1.1	SHEET	2 OF 5

1.PIN LOCATION AND CONNECTION

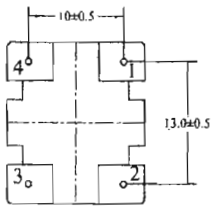


FIGURE-1

CONNECTION (● :POLARITY)

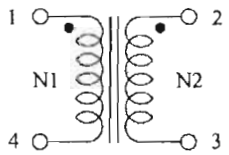


FIGURE-2

2.ELECTRICAL SPECIFICATION

2-1 INDUCTANCE, WIND, NUMBER OF TURNS, DCR. AND WINDING MATERIALS, TEST INSTRUCTION AND CONDITION

ZENTECH : 3200B , 502A , F = 20KHz V = 0.1V AT 25°C

WINDING	NUMBER OF TURNS	WIRE		INDUCTANCE	DCR (mΩ)	REMARK
		TYPE	ø			
N1 (1 - 4)	40+24 Ts (Ref)	MW75	0.35	25.0 mH Min	550 Max	
N2 (2 - 3)	40+24 Ts (Ref)	MW75	0.35	25.0 mH Min	550 Max	

2-2 INSULATION RESISTANCE SHALL BE 100 M OHMS OR MORE WHEN DC 500V IS APPLIED TO THE FOLLOWING WINDING AND CORE.

A. MEASUREMENT POINTS 1. BETWEEN ALL WINDING.
2. BETWEEN ALL WINDING AND CORE.

B. DIELECTRIC STRENGTH
NO ABNORMALITIES SHALL DEVELOP AFTER APPLICATION OF A VOLTAGE FOR ONE SECOND IN THE FOLLOWING MANNER.

HI-POT TEST 100%

TEST POINTS	APPLIED VOLTAGE
N1 TO N2	AC 1.5KV 50/60Hz
N1 , N2 TO CORE	AC 1.5KV 50/60Hz

NOTE:1. THE CUTOFF CURRENT OF THE WITHSTANDING VOLTAGE TESTED SHALL 3.0mA ONE SECOND OR LESS.
2. MEASUREMENT SHALL BE TAKEN UNDER NORMAL TEMPERATURE AND HUMIDITY.

YUJING

SPECIFICATION

CUSTOMER	明 緯	PART NO.	LF-852	DESCRIPTION		OTC-19 V/4S	
MODEL NO.	OTC19B73	DATE	2008-10-06	REV.	1.1	SHEET	3 OF 5

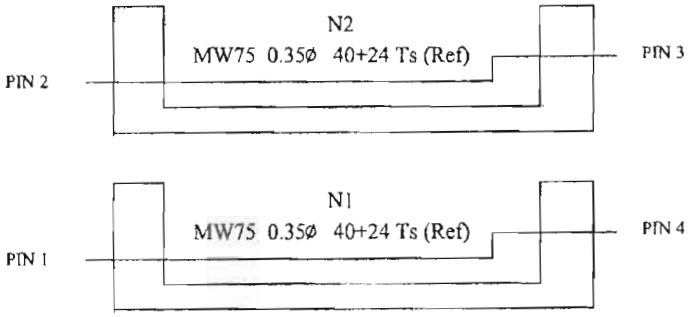
3.NOTE FOR FIGURE-1

THE PIN NUMBERS IN FIGURE-1 CORRESPOND TO INDICATEED NUMBERS ON THE BOBBIN.

4.NOTE FOR FIGURE-2

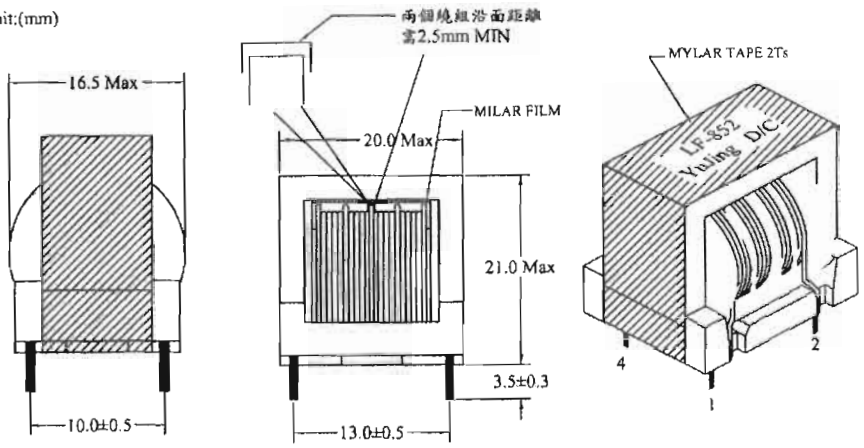
4-1 THE POLARITY IN FIGURE-2 INDICATEED THE DTART PIN OF EACH WINDINGS.
4-2 INDICATEED NUMBERS IN FIGURE-2 CORRESPOND TO PIN NUMBERS ON THE BOBBIN (WIRE SHALL BE WOUND AROUND PIN)
INDICATEED ALPHABETS MEAN LEAD WIRES.(NOT WOUND AROUND PIN)

5.CONSTRUCTION DETAIL OF INSULATION



6.ADHESIVE, IDENTIFICATION MARKING & DIMENSION

Unit:(mm)



YUJING

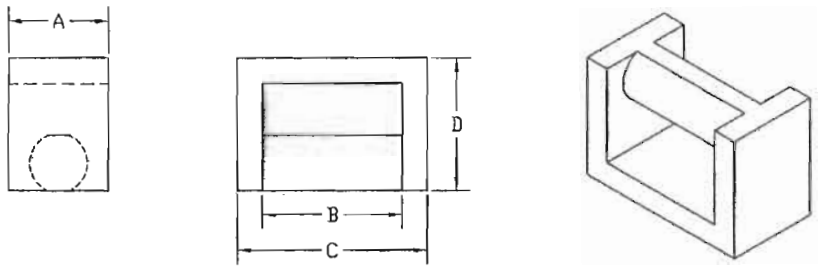
SPECIFICATION

CUSTOMER	明 緯	PART NO.	LF-852	DESCRIPTION		OTC-19 V/4S	
MODEL NO.	OTC19B73	DATE	2008-10-06	REV.	1.1	SHEET	4 OF 5

7.VARNISHING

VACUUM IMPREGNATION OF VARNISH SHALL BE PERFORMED
AFTER ADHESION PROCESS.

8.FERRITE CORE DIMENSIONS



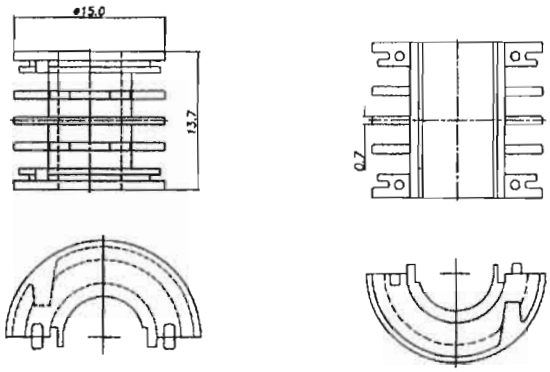
CORES OTC-19	DIMENSIONS(mm)			
	A	B	C	D
	10.0± 0.5	13.5± 0.2	19.0± 0.5	13.2± 0.5

MAATERIAL:NO GAP
AL = 5000 MIN

PAT. ZL 98 2 47324.9
US 6,121,696
J 3060520
新型第 164060 號

9.BOBBIN CONSTRUCTION: YJ-005-1

MATERIAL:PBT



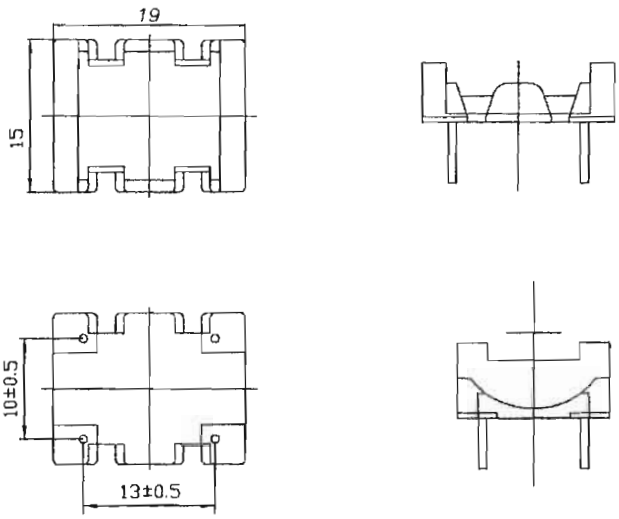
YUJING

SPECIFICATION

CUSTOMER	明 煒	PART NO.	LF-852	DESCRIPTION		OTC-19 V/4S	
MODEL NO.	OTC19B73	DATE	2008-10-06	REV.	1.1	SHEET	5 OF 5

10.BASE CONSTRUCTION: YJ-006-3

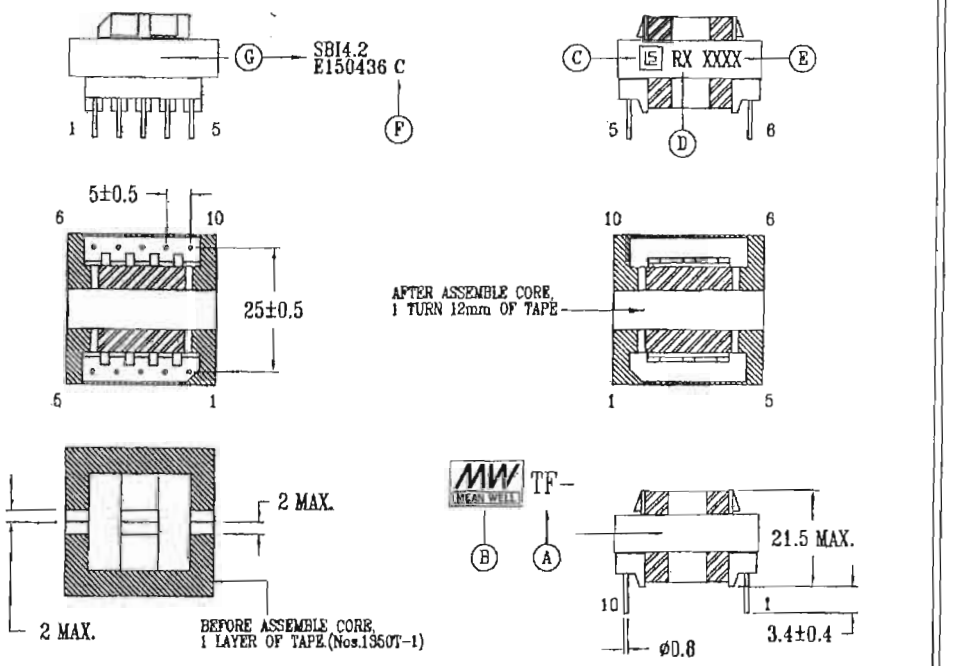
MATERIAL: T375J



11.MATERIAL LIST:

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1.	BOBBIN	1403G3	NAN YA PLASTICS CORP PLASTICS 4TH DIV	E130155
2.	BASE	T375J	CHANG CHUN PLASTICS CO., LTD.	E59481
3.	CORE	OTC-19 3E6	FERROXCUBE TAIWAN LTD.	
4.	WIRE	UEW-4#	JUNG SHING WIRE CO., LTD.	E174837
		UEW/U	PACIFIC ELECTRIC WIRE&CABLE CO., LTD.	E201757
		UEW	WA TAI ELECTRIC MATELRIALS FACTORY LTD.	E243939
5.	VARNISH	AC-43	JOHN C DOLPH CO.	E317427
		WP-2952F-2G	HITACHI CHEMICAL CO., LTD.	E72979
6.	MYLAR FILM	X-10	TORAY INDUSTRIES INC FILM DIV	E86511
7.	MYLAR TAPE	#1350F-1	3M COMPANY CO., LTD.	E17385
		CT-280	YAHUA ADHESIVE TAPE CO., LTD.	E178516

1.DIMENSIONS:



A. PART NO.: TF-1795~TF-1797
B. CUSTOMER'S MARK
C. THE MARK IS VENDER'S TRADE MARK
D. NUMBER OF THE EDITION
E. THE DATE (YEAR & WEEK) OF PRODUCTION
F. MANUFACTURER PLACE : CHINA
G. CLASS 130 (B) TRANSFORMER INSULATION SYSTEM DESIGNATED SBI4.2 FILE E150436

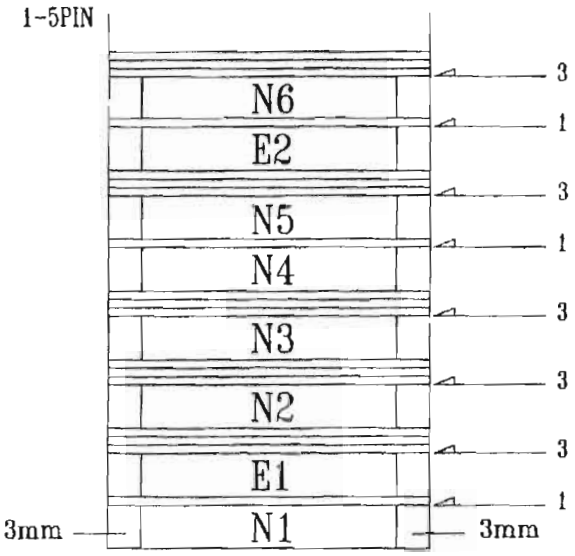
REMARKS:

1. GAP OF E CORE ASSEMBLE FROM THE 1-5PIN SIDE, THEN WRAPPING 2 TURNS OF TAPE .
2. THE PIN 6,7 MUST BE REMOVED.
3. THE PIN 3 MUST BE CUT OFF AFTER PIN DIPPED.
4. AFTER ASSEMBLE CORE, WRAP 1 TURN 12mm OF TAPE AROUND THE CORES AND COILS, THEN SOLDER THE OUTER COPPER FOIL IN PIN5,6 SIDE, AND LINK THE COPPER FOIL WITH 0.3ø LEAD, AND PASS THROUGH TEFLON TUBE, WINDING IN PIN5, FINALLY WRAP 1 TURN OF Nos.1350T-1 TAPE AROUND THE OUTER COPPER FOIL.

LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1795~TF-1797 DESCRIPTION: EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

2.SCHEMATIC:

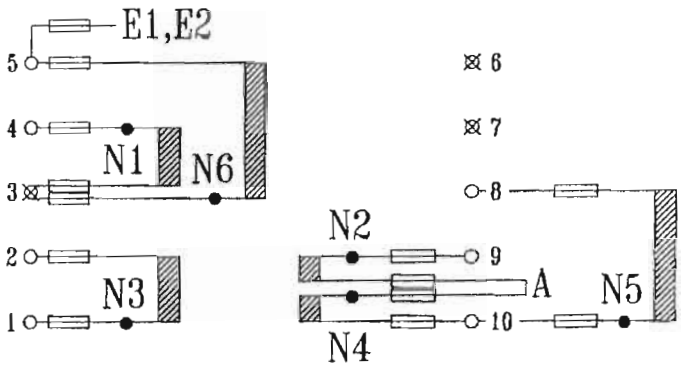
TAPE LAYERS



BOBBIN

WINDINGS

TEFLON TUBE



PRIMARY

SECONDARY

LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1795 DESCRIPTION: EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

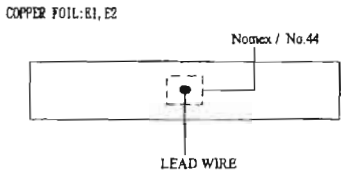
3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.Ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 950uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	9 – A	0.4	24		(9 – 10) : 40≥ mΩ MAX.
N3	1 – 2	0.3	12		198 mΩ MAX.
N4	A – 10	0.4	23		
N5	10 – 8	0.3	5		108 mΩ MAX.
E2	5	1/1000"	1.1		
N6	3 – 5	0.4	24		267 mΩ MAX.

REV.

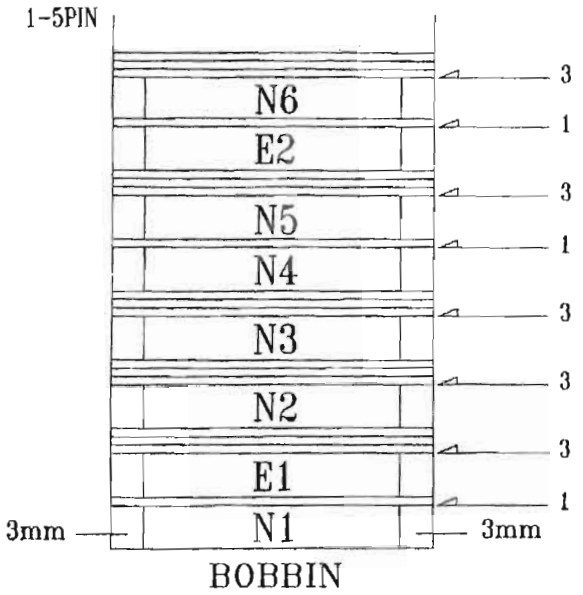
NOTE:

1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)



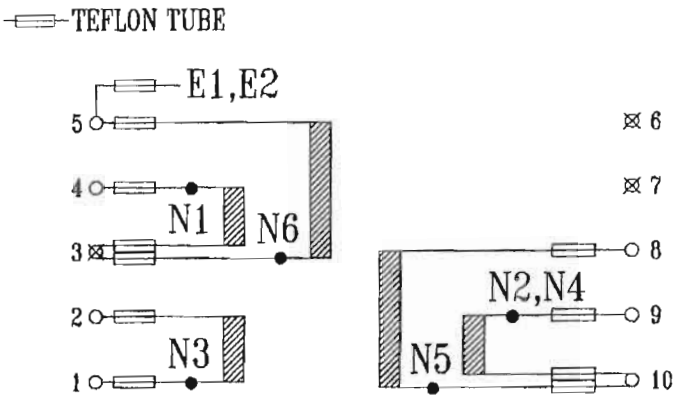
LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1795 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

2.SCHEMATIC: TAPE LAYERS



BOBBIN

WINDINGS



PRIMARY SECONDARY

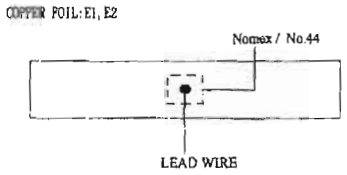
LONG SAIL ELECTRONIC CO.,LTD.			UNIT	PART NO.: TF-1796,TF-1797 DESCRIPTION: EE-30
APPROVED	CHECKED	DRAWN	mm	
APR.30.08	APR.30.08	APR30.8	DATE APR.30 2008	

3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.Ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 950uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	9 – 10	0.32	30		198mΩ MAX.
N3	1 – 2	0.3	12		192mΩ MAX.
N4	9 – 10	0.32	30		
N5	10 – 8	0.3	5		108 mΩ MAX.
E2	5	1/1000"	1.1		
N6	3 – 5	0.4	24		267mΩ MAX.

NOTE:

1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)



LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1796 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	for Model : LPC-35-1050
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

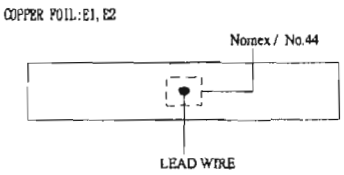
3.ELECTRICAL CHARACTERISTICS:

ITEM	TERMINAL	WIRE DIA.Ø	TURN	INDUCTANCE	DC RESISTANCE
N1	4 – 3	0.4	48	(4 – 5) : 900uH±5%	321 mΩ MAX.
E1	5	1/1000"	1.1		
N2	9 – 10	0.4	25		136 mΩ MAX.
N3	1 – 2	0.3	12		192mΩ MAX.
N4	9 – 10	0.4	25		
N5	10 – 8	0.3	5		108 mΩ MAX.
E2	5	1/1000"	1.1		
N6	3 – 5	0.4	24		267mΩ MAX.

REV.

NOTE:

1. THE INDUCTANC IS MEASURED AT 1 KHz 0.25V WITH ALL OTHER WINDINGS OPEN-CIRCUIT.
2. THE INSULATION RESISTANCE BETWEEN PRI. TO SEC. AND CORE IS OVER 100M OHM AT DC 500V.
3. HI-POT TEST:
   PRIMARY TO SECONDARY – 3.6 KVac/1second, 1mA
   PRIMARY TO CORE – 1.8 KVac/1second, 1mA
   SECONDARY TO CORE – 1.8 KVac/1second, 1mA
4. TEST EQUIPMENT:
   (1)Zentech 1062 LCZ METER
   (2)Chen Hwa 502 OHM METER
5. E1,E2: 1/1000" x 10mm COPPER FOIL.(LEAD WIRE 0.3ø.)



LONG SAIL ELECTRONIC CO., LTD.			UNIT	PART NO. : TF-1797 DESCRIPTION : EE-30
APPROVED	CHECKED	DRAWN	mm	for Model : LPC-35-1600
APR.30.08	APR.30.08	APR.30.08	DATE APR.30 2008	

TEST RECORD NO. 1

SAMPLES:

Samples of Models LPV-35-5, LPV-35-12, LPV-35-15, LPV-35-24, LPV-35-36, LPC-35-1050, LPC-35-1400 were submitted by the applicant and subjected to the following tests with the requirements in the Standard for Class 2 Power Units, UL 1310, Fifth Edition and the Canadian Standard for Power Supplies with Extra Low Voltage Class 2 Outputs, CAN/CSA C22.2 No. 223-M91, Second Edition.

Model LPC-35-700 is for UL only.

GENERAL:

The tests results reported relate only to the items tested.

The following tests were conducted with the results indicated.

The following tests conducted in accordance with UL 1310 were considered representative of the same tests required by Canadian Standard, CAN/CSA C22.2 No. 223-M91 with acceptable results. Clause and paragraph reference conventions consist of the UL 1310 reference followed by (CSA C22.2 No.223) reference.

Working Voltage Measurements:	24.2
(Electrical Spacings, CSA C22.2 No. 223)	(4.10)
Leakage Current Test:	26(6.5)
Dielectric Voltage Withstand Test After Leakage Current Test:	27
Leakage Current Test After Humidity Exposure:	27
Dielectric Voltage Withstand Test After Humidity Exposure:	27
Maximum Output Voltage Test:	28
(Open-Circuit Secondary Voltage, CSA C22.2 No.223)	(6.2.1)
Normal Input Test:	50.2
(Rated Input, CSA C22.2 No.223)	(6.2.2)
Maximum Input Test:	29
(Rated Input, CSA C22.2 No. 223)	(6.2.2)
Output Current And Power Test (5 S):	30
(Maximum Output Current And Power, CSA C22.2 No.223)	(6.2.4)
Dielectric Voltage Withstand Test After Output Current And Power Test [NOT INHERENTLY LIMITED UNITS OR CSA C22.2 No. 223 Units]:	34
(Dielectric Strength, CSA C22.2 No. 223)	(6.4)

Full-Load Output Current Test:	32
Normal Temperature Test - General:	33
(Temperature (Normal), CSA C22.2 No. 223)	(6.3)
Dielectric Voltage Withstand Test:	34
(Dielectric Strength, CSA C22.2 No.223)	(6.4)
Output Loading Test - Abnormal:	39.2
(Secondary Circuit Protection, CSA C22.2 No. 223)	(6.6)
Dielectric Voltage Withstand Test After Output Loading Test:	34
(Dielectric Strength, CSA C22.2 No. 223)	(6.4)
Transformer Burnout Test (Switch Mode Designs) - Abnormal:	39.3
Dielectric Voltage Withstand Test After Transformer Burnout Test:	34
Component Breakdown Test - Abnormal:	39.6
(Abnormal, CSA C22.2 No. 223)	(6.7)
Dielectric Voltage Withstand Test After Component Breakdown Test:	34
(Dielectric Strength, CSA C22.2 No. 223)	(6.4)
Transformer Insulating Materials Test:	40
(Insulating Material, Csa C22.2 No. 223)	(6.13)

The test methods and results of the above tests have been reviewed and found in accordance with the requirements in the Standards mentioned above.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in Class 2 Power Units, UL 1310, Fifth Edition, dated May 3, 2005, Last Revise date July 17, 2008; and Power Supplies with Extra-Low-Voltage Class 2 Outputs, CAN/CSA C22.2 No 223-M91, Second Edition, dated June 1991, and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

CONCLUSION

Samples of the component covered by this Report have been found to comply with the requirements covering the category and the component is judged to be eligible for Component Recognition and Follow-Up Service. Under the Service, the manufacturer is authorized to use the Recognized Marking described in the Follow-Up Service Procedure on such products, which comply with said Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products, which properly bear the Recognized Markings are considered as Recognized Components by Underwriters Laboratories Inc. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Report by:
POLING YEH
Engineer

Reviewed by:
RICHARD LEE
Project Engineer

SARA CHU
Engineer