



MS. SANDY HSU
 MEAN WELL ENTERPRISES CO LTD
 28 WUQUAN 3RD RD WUGU DIST
 NEW TAIPEI
 248 TAIWAN

Date: 2013/09/17
 Subscriber: 710861002
 PartySite: 156523
 File No: E334687
 Project No: 13NB01980
 PD No: 13043232
 Type: R
 PO Number:

Subject: **Procedure And/Or Report Material**

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

Issue

<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
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2010/05/05	1	10	Cert of Compliance	
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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 UL's Customer Service Professionals. Contact information for all of UL's global offices can be found at <http://www.ul.com/global/eng/pages/corporate/contactus>.

If you'd like to receive updated materials FASTER, UL offers electronic access and/or delivery of this material. For more details, contact UL's Customer Service Professionals as shown above.

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SCL File

INDEX (cont.)

Cat. Nos.	USR	CNR	Section
LED power supplies other than class 2, Isolated output, Models HLG-150-YZ and HLG-185-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.	x	x	7
Models HLG-150H-YZ and HLG-185-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A, B or AB.			
Models LPF-XY-ZQ, where X may be 40 or 60, Y may be blank or D; Q may be blank or LU; and Z may be 12, 15, 20, 24, 30, 36 and 42.	X	X	8
Models LPF-XY-ZQ, where X may be 40 or 60, Y may be blank or D; Q may be blank or LU; and Z may be 48 and 54.	X		8
LED Drivers Other Than Class 2, Isolated output, Models CLG-150-12A, CLG-150-15A, CLG-150-20A, CLG-150-24A, CLG-150-30A, CLG-150-36A, CLG-150-12B, CLG-150-15B, CLG-150-20B, CLG-150-24B, CLG-150-30B, CLG-150-36B, CLG-150-12C, CLG-150-15C, CLG-150-20C, CLG-150-24C, CLG-150-30C, CLG-150-36C, CLG-150-12, CLG-150-15, CLG-150-20, CLG-150-24, CLG-150-30, CLG-150-36, CLG-150-48A, CLG 150-48B, CLG-150-48C and CLG-150-48	X	X	9
LED Drivers Other Than Class 2, Models: HLG-240H-yz, where y = 12, 15, 20, 24, 30, 36, 42, 48, 54 ; z = Blank, A, B, or C); Models: HLG-240-yz, where y = 12, 15, 20, 24, 30, 36, 42, 48, or 54 and z = Blank, A, B, or C.	X	X	10
Isolated Class 2 LED Power Supplies, Models CEN-100-X, where X can be 20, 24, 30, 36, 42, for output voltage.	X	X	11
Class 2 LED Power Supplies, Models CEN-100-X, where X can be 48,54 for output voltage.	X	-	11
Isolated Class 2 LED Power Supplies: HLG-80H-YZ (for units with metal enclosure), where Y can be 12, 15, 20, 24, 30, 36, 42, 48, 54 and Z can be A, B, D, AB or blank. HLN-80H-YZ (for units with plastic enclosure), where Y can be 12, 15, 20, 24, 30, 36, 42, 48, 54 and Z can be A B or AB. HLP-80H-Y (for units without enclosure), Y can be 12, 15, 20, 24, 30, 36, 42, 48, 54. LPF-90X-Y, where Y can be 15, 20, 24, 30, 36, 42, 48, 54 and X can be D or blank.	X	X	12
Isolated Class 2 LED Power Supplies: PLP-X-Y, where X can be 30, 45 or 60 and Y can be 12 or 24.	X	X	13
Isolated Class 2 LED Power Supplies: PLP-X-Y, where X can be 30, 45 or 60 and Y can be 48.	X	-	13
LED Drivers Other Than Class 2, Isolated output Models: HLG-320H-yz, where y = 12, 15, 20, 24, 30, 36, 42, 48, 54; z = Blank, A, B, C, or D	X	X	14

INDEX (cont.)

Cat. Nos.	USR	CNR	Section
Isolated Class 2 LED Power Supplies: HLG-XH-YZ (for units with metal enclosure), where X may be 40 or 60, Y can be 12, 15, 20, 24, 30, 36, 42 and Z can be A, B, D, AB or blank. HLN-XH-YZ (for units with plastic enclosure), where X may be 40 or 60, Y can be 12, 15, 20, 24, 30, 36, 42 and Z can be A, B or AB. HLP-XH-Y (for units without enclosure), where X may be 40 or 60, Y can be 12, 15, 20, 24, 30, 36, 42.	x	x	15
Isolated Class 2 LED Power Supplies: HLG-XH-YZ (for units with metal enclosure), where X may be 40 or 60, Y can be 48 or 54 and Z can be A, B, D, AB or blank. HLN-XH-YZ (for units with plastic enclosure), where X may be 40 or 60, Y can be 48 or 54 and Z can be A, B or AB. HLP-XH-Y (for units without enclosure), where X may be 40 or 60, Y can be 48 or 54.	x	-	15
Isolated Class 2 LED Power Supplies: Model: PCD-16-yz, PLD-16-yz, y can be 700, 1050, 1400 and z may be A or B. Model: PCD-25-yz, PLD-25-y, y can be 1050, 1400 and z may be A or B.	X	X	16
Isolated Class 2 LED Power Supplies: Model: PCD-16-350z, PLD-16-350z, and z may be A or B. Model: PCD-25-yz, PLD-25-y, y can be 350, 700 and z may be A or B. PCD-25-500AZT	X	-	16
Isolated Class 2 LED Power Supplies: HVG-100-XY, where X may be 15, 20, 24, 30 and 36; Y can be A, B or D.	X	X	17
Isolated Class 2 LED Power Supplies: HVG-100-XY, where X may be 15, 20, 24, 30, 36, 42, 48 and 54; and Y can be A, B, AB or D.	X	-	17
LED Drivers Other Than Class 2, Model: HVGC-100-XY, where X may be 350 or 700 and Y can be A, B or D.	X	X	18
Isolated Class 2 LED Power Supplies: Models APC-12-z, where z may be 350 or 700 and APC-16-z where z may be 700.	X	X	19
Isolated Class 2 LED Power Supplies: Model APC-16-350.	X	-	19
Isolated Class 2 LED Power Supplies: models LPF-xy-zw series, where x may be 16 or 25; y may be Blank or D; z may be 12, 15, 20, 24, 30, 36, 42, 48, or 54 and w may be P or blank.	X	X	20
Isolated Class 2 LED Power Supplies: Models APV-y-z, where y may be 12 or 16 and z can be 5, 12, 15 or 24	X	X	21
LED Drivers Other Than Class 2, Model: HLG-60H-CXY, where X may be 350 or 700 and Y can be A, B, AB or D.	X	X	22

CERTIFICATE OF COMPLIANCE

Certificate Number 20130917-E334687
Report Reference E334687-20101017
Issue Date 2013-SEPTEMBER-17



Issued to: MEAN WELL ENTERPRISES CO LTD
28 WUQUAN 3RD RD WUGU DIST,
NEW TAIPEI, 248 TAIWAN.

This is to certify that representative samples of COMPONENT - DRIVERS FOR LIGHT-EMITTING-DIODE ARRAYS, MODULES AND CONTROLLERS
See Addendum Page for Models/Product

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: See Addendum Page for Standard(s) for Safety
Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Recognized Component Marks for the U.S. and Canada should be considered as being covered by UL's Recognition and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Recognized Component Mark for the U.S. generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: , may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions. The UL Recognized Component Mark for Canada consists of the UL Recognized Mark for Canada:  and the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Recognized Component Mark on the product.



William R. Carney, Director, North American Certification Programs

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20130917-E334687
Report Reference E334687-20101017
Issue Date 2013-SEPTEMBER-17

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Models/Product :

USR/CNR – LED power supplies other than class 2, Isolated output:

Models HLG-150-YZ and HLG-185-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.

Models HLG-150H-YZ and HLG-185H-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A, B or AB.

Models HLG-150-YZ and HLG-185-YZ are similar to models HLG-150H-YZ and HLG-185H-YZ respectively except input voltage and secondary windings.

Standard(s) for Safety:

UL 8750, Light Emitting Diode (LED) Light Sources for Use in Lighting Products
CSA C22.2 No. 250.13-12, LIGHT EMITTING DIODE (LED) EQUIPMENT FOR LIGHTING APPLICATIONS
UL 1310, Class 2 Power Units
CSA C22.2 no. 223, Power Supplies with Extra low voltage class 2 outputs



William R. Carney, Director, North American Certification Programs
UL LLC

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LOCATION

(494093-001) MEAN WELL (GUANGZHOU) ELECTRONICS CO
LTD
A BLDG, 2ND FL
YUEAN INDUSTRIAL PARK
DONGPU TOWN, TIANHE
GUANGZHOU 510660 GUANGDONG CHINA

(710861-002) MEAN WELL ENTERPRISES CO LTD
28 WU-CHUAN 3RD RD
WUGU INDUSTRIAL PARK
TAIPEI HSIEN
248 TAIWAN

ML FILE NO. E336107

Issued: 2010-06-11

MULTIPLE RECOGNITION
of
DRIVERS FOR LIGHT-EMITTING-DIODE ARRAYS, MODULES AND CONTROLLERS -
COMPONENT
(FKSZ2)
for

[125245-001] SLOANLED, DIV OF SLOAN CO INC

Basically Recognized for:

[710861-002] MEAN WELL ENTERPRISES CO LTD (SCL)

Basically Recognized products covered by Procedure and/or Reports under File No. E334687, Volume 1

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designation
LED drivers, Class 2 isolated output	2010-03-30	CLG-100-24	701934

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER GUANGZHOU - 316
UL INSPECTION CENTER LINKOU - 408

ML FILE NO. E345983

Issued: 2011-05-19

MULTIPLE RECOGNITION
of
DRIVERS FOR LIGHT-EMITTING-DIODE ARRAYS, MODULES AND CONTROLLERS -
COMPONENT
(FKSZ2)
for

[612003-001] TRIDONIC GMBH & CO KG

Basically Recognized for:

[710861-002] MEAN WELL ENTERPRISES CO LTD (SCL)

Basically Recognized products covered by Procedure and/or Reports under File No. E334687, Volume 1

Products Covered	Report Date	Basic Applicant's (Supplier's) Product Designation	Multiple Listee's Product Designation
LED power supplies, Class 2 isolated	2010-11-16	LPF-40-48	25000669 LCI 033/ 0700 U010

MARKING: Same as that described in Follow-Up Service Procedure and/or Report except for Multiple Listee's name, ML Tradename, when applicable, and product designation.

UL INSPECTION CENTER GUANGZHOU - 316
UL INSPECTION CENTER LINKOU - 408
UL INSPECTION CENTER NANJING - 521

Recognized Component Marking Data Page (RCMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

1. The Recognized Company's identification specified in this document.
2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
3. The UL Recognized Component Mark shown below.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

RECOGNIZED COMPONENT MARK



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol ® shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

THIS FORM PAGE IS TO BE REVISED BY THE NORTHBROOK LABEL DEPARTMENT ONLY

Recognized Component Marking Data Page (RCMDP)

(File Immediately After Authorization Page)

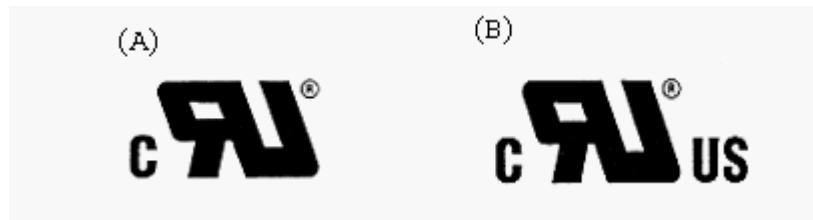
RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

1. The Recognized Company's identification specified in this document.
2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
3. The UL Recognized Component Mark shown below:
 - (A) Recognized only to Canadian safety requirements, or;
 - (B) Recognized to both U.S. and Canadian safety requirements.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

Recognized Component Mark



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol ® shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

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Cat. Nos.	USL	CNL	Section
<p>USR/CNR - Isolated LED Driver Models CLY-100-Z, Y can be G (for with Glue) or N (for without Glue), Z can be 12, 15, 20, 24, 27, 36 for output voltage. Models PLN-100-Z, Z can be 12, 15, 20, 24, 27, 36 for output voltage and models CLG-100-24DLU and CLG-100-24LU.</p> <p>.</p> <p>USR Class 2 Power Supply, Models CLY-100-48 and PLN-100-48, Y can be G (for with Glue) or N (for without Glue).</p>	X	X	1
<p>USR/CNR - LED Driver Models CLy-60-z, where y can be G (with potting compound) or N (without potting compound), z can be 12, 15, 20, 24, 27, 36 for output voltage. Models PLN-60-z, PLN-45-z, z can be 12,15, 20, 24, 27, 36 for output voltage, without potting compound.</p> <p>USR Class 2 LED Power Supplies, Models CLy-60-48, where y can be G (with potting compound) or N (without potting compound). Models PLN-60-48, PLN-45-48 without potting compound.</p>	X	X	2
<p>Isolated Class 2 LED Power Supplies, Models PLY-20-X, where X can be 20, 24, 30, 36, 42, for output voltage, Y can be N (for with enclosure) or P (for without enclosure).</p>	x	x	3
<p>Power Supplies with Class 2 output, Models CEN-60-Y Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and model CEN-75-Y, where Y can be 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage.</p>	X	X	4
<p>Isolated Class 2 LED Power Supplies: Models HLG-100-YZ Series, where Y can be 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.</p> <p>Models HLG-100H-YZ Series, where Y can be 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.</p>	x	x	5
<p>LED power supplies other than class 2:</p> <p>Models HLG-120-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.</p> <p>Models HLG-120H-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.</p>	x	x	6
<p>Models HLG-150-YZ and HLG-185-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.</p> <p>Models HLG-150H-YZ and HLG-185-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.</p>	x	x	7

GENERAL

PRODUCT COVERED:

Component - Drivers For Light-Emitting-Diode Arrays, Modules and Controllers.

MULTIPLE MANUFACTURING LOCATIONS:

If the Applicant manufactures the products in this Follow-Up Service Procedure at more than one location, a distinctive marking (which may be in code) shall be provided to identify the unit as the product of a particular factory.

FACTORY LOCATIONS:

Manufacturer Name and Subscriber Number	Factory ID
MEAN WELL (GUANGZHOU) ELECTRONICS CO LTD (494093-001)	MW01
MEAN WELL ENTERPRISES CO LTD (710861-002)	none

CONSTRUCTION DETAILS:

General - Unless specified otherwise in the Report, all Listed products shall comply with the following Construction Details.

Internal Wiring - Unless noted otherwise, all internal and external wiring is R/C (AVLV2). See individual section for minimum voltage and temperature ratings and insulation thickness.

Insulating Tubing and Sleeving - Unless otherwise noted, all insulating tubing is R/C (YDPU2) or (UZFT2) with minimum voltage and temperature ratings as specified in each section.

Soldered Connections - All soldered connections are mechanically secured before soldering. When hand soldered, leads on printed circuit boards are bent over prior to soldering.

Exception - Printed circuit board assemblies that are wave soldered.

Trace Layouts - PCB trace layouts, if provided in individual sections, are for the Field Representative to verify that the PCB trace layout has not changed.

Coil Device Verification - The number of turns on coil devices specified in individual sections are verified by comparing with coil manufacturer certification documentation.

Abbreviations -

Sec. Gen. - Section General

R/C - Recognized Component

CNL - Canadian Standard, Listed

USL - United States, Listed

PCB = Printed Circuit Board

Corrosion Protection - Parts are of corrosion resistant material or plated or painted as corrosion protection.

Tolerances - Unless specified otherwise, all indicated dimensions are approximate.

Markings - When the manufacturer elects to utilize a label to incorporate the marking information, they shall employ a R/C Marking and Labeling System (PGDQ2). In addition, the label shall be suitable for the surface to which it is applied and the temperature, as noted in the individual report.

CONSTRUCTION DETAILS FOR C-UL PRODUCTS:

General - Unless specified otherwise in the Report, the following Construction Details for C-UL ballasts shall take precedence.

References to "CN" apply only to products evaluated to Canadian requirements as indicated under "Product Covered" in the individual Reports.

"CN" indicates that the component has been evaluated to Canadian requirements. The Field Representative shall confirm that the component has a CSA Certification Mark or an equivalent identifier or a Canadian UL Listing or Recognition Mark.

Marking - Within Canada, there are federal and local statutes and regulations, such as the Consumer Packaging and Labeling Act, requiring the use of bilingual product markings on products intended for the Canadian market. It is the responsibility of the manufacturer (or distributor) to comply with this law. The UL Follow-Up Service Procedures will only include the English versions of the markings.

File E334687
Project 10CA18973

Issued: October 17, 2010
Revised: October 24, 2011

REPORT

on

Component - Drivers for Light-Emitting Diodes Arrays, Modules and Controllers

Mean Well Enterprises Co LTD

*

New Taipei, Taiwan

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Underwriters Laboratories Inc. authorizes the above named company to reproduce this Report through page 2.

DESCRIPTION

PRODUCT COVERED:

USR/CNR - LED power supplies other than class 2, **Isolated output:**

Models HLG-150-YZ and HLG-185-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A or B.

Models HLG-150H-YZ and HLG-185H-YZ Series, where Y can be 12, 15, 20, 24, 30, 36, 42, 48 or 54 for output voltage, and Z = blank, A, B or AB.

Models HLG-150-YZ and HLG-185-YZ are similar to models HLG-150H-YZ and HLG-185H-YZ respectively except input voltage and secondary windings.

ELECTRICAL RATINGS:

Model	Input (ac)			Output (dc)	
	V	A	Hz	V	A
HLG-150-12 HLG-150-12A HLG-150-12B	100-240	1.7	50/60	12	12.5
HLG-150H-12 HLG-150H-12A HLG-150H-12B HLG-150H-12AB	100-240 277	1.7 0.7	50/60	12	12.5
*HLG-150-15 HLG-150-15A HLG-150-15B	100-240	1.7	50/60	15	10
*HLG-150H-15 HLG-150H-15A HLG-150H-15B HLG-150H-15AB	100-240 277	1.7 0.7	50/60	15	10
HLG-150-20 HLG-150-20A HLG-150-20B	100-240	1.7	50/60	20	7.5
HLG-150H-20 HLG-150H-20A HLG-150H-20B HLG-150H-20AB	100-240 277	1.7 0.7	50/60	20	7.5
HLG-150-24 HLG-150-24A HLG-150-24B	100-240	1.7	50/60	24	6.3
HLG-150H-24 HLG-150H-24A HLG-150H-24B HLG-150H-24AB	100-240 277	1.7 0.7	50/60	24	6.3
HLG-150-30 HLG-150-30A HLG-150-30B	100-240	1.7	50/60	30	5

HLG-150H-30 HLG-150H-30A HLG-150H-30B HLG-150H-30AB	100-240 277	1.7 0.7	50/60	30	5
HLG-150-36 HLG-150-36A HLG-150-36B	100-240	1.7	50/60	36	4.2
HLG-150H-36 HLG-150H-36A HLG-150H-36B HLG-150H-36AB	100-240 277	1.7 0.7	50/60	36	4.2
HLG-150-42 HLG-150-42A HLG-150-42B	100-240	1.7	50/60	42	3.6
HLG-150H-42 HLG-150H-42A HLG-150H-42B HLG-150H-42AB	100-240 277	1.7 0.7	50/60	42	3.6
HLG-150-48 HLG-150-48A HLG-150-48B	100-240	1.7	50/60	48	3.2
HLG-150H-48 HLG-150H-48A HLG-150H-48B HLG-150H-48AB	100-240 277	1.7 0.7	50/60	48	3.2
HLG-150-54 HLG-150-54A HLG-150-54B	100-240	1.7	50/60	54	2.8
HLG-150H-54 HLG-150H-54A HLG-150H-54B HLG-150H-54AB	100-240 277	1.7 0.7	50/60	54	2.8
HLG-185-12 HLG-185-12A HLG-185-12B	100-240	2.1	50/60	12	13
HLG-185H-12 HLG-185H-12A HLG-185H-12B HLG-185H-12AB	100-240 277	2.1 0.8	50/60	12	13
*HLG-185-15 HLG-185-15A HLG-185-15B	100-240	2.1	50/60	15	11.5
*HLG-185H-15 HLG-185H-15A HLG-185H-15B HLG-185H-15AB	100-240 277	2.1 0.8	50/60	15	11.5
HLG-185-20 HLG-185-20A HLG-185-20B	100-240	2.1	50/60	20	9.3

HLG-185H-20 HLG-185H-20A HLG-185H-20B HLG-185H-20AB	100-240 277	2.1 0.8	50/60	20	9.3
HLG-185-24 HLG-185-24A HLG-185-24B	100-240	2.1	50/60	24	7.8
HLG-185H-24 HLG-185H-24A HLG-185H-24B HLG-185H-24AB	100-240 277	2.1 0.8	50/60	24	7.8
HLG-185-30 HLG-185-30A HLG-185-30B	100-240	2.1	50/60	30	6.2
HLG-185H-30 HLG-185H-30A HLG-185H-30B HLG-185H-30AB	100-240 277	2.1 0.8	50/60	30	6.2
HLG-185-36 HLG-185-36A HLG-185-36B	100-240	2.1	50/60	36	5.2
HLG-185H-36 HLG-185H-36A HLG-185H-36B HLG-185H-36AB	100-240 277	2.1 0.8	50/60	36	5.2
HLG-185-42 HLG-185-42A HLG-185-42B	100-240	2.1	50/60	42	4.4
HLG-185H-42 HLG-185H-42A HLG-185H-42B HLG-185H-42AB	100-240 277	2.1 0.8	50/60	42	4.4
HLG-185-48 HLG-185-48A HLG-185-48B	100-240	2.1	50/60	48	3.9
HLG-185H-48 HLG-185H-48A HLG-185H-48B HLG-185H-48AB	100-240 277	2.1 0.8	50/60	48	3.9
HLG-185-54 HLG-185-54A HLG-185-54B	100-240	2.1	50/60	54	3.45
HLG-185H-54 HLG-185H-54A HLG-185H-54B HLG-185H-54AB	100-240 277	2.1 0.8	50/60	54	3.45

TECHNICAL CONSIDERATIONS (NOT FOR UL FIELD REPRESENTATIVE USE):

This component has been judged on the basis of the spacings required in the standard for Light Emitting Diode (LED) Light Sources for Use In Lighting Products, UL 8750, First Edition.

USR - Indicates investigation to the United States requirements for the standard for Light Emitting Diode (LED) Light Sources for Use In Lighting Products, UL 8750, First Edition and the Standard Power Units other than Class 2, UL 1012, Seventh Edition.

CNR - Indicates investigation to the Canadian Standard for Luminaires, CSA C22.2 No. 250.0-08; and the Standard for General Use Power Supplies, C22.2 No. 107.1-01, reaffirmed 2006.

SPACING OF ELECTRICAL PARTS:

The spacing between uninsulated live parts of opposite polarity, including magnet wire, and between those parts and exposed metal parts that can be contacted shall not be less than the clearance (through-air) and the creepage distance (over an insulating surface) as described:

Locations of live electrical parts and conditions	Min spacing, mm		
	Clearance	Creepage Distance for printed wiring boards (CTI < 175)	Creepage Distance for ceramic and other materials (CTI => 600)
Between parts within drivers for indoor (dry), and outdoor (damp or wet) locations (125v)	0.5	1.5	0.75
Between parts within drivers for indoor (dry), and outdoor (damp or wet) locations (300v)	1.5	3.0	1.5
Between parts on a printed wiring board that are soldered in place but can move in production prior to soldering to fixed parts; or between parts on a printed wiring board to the enclosure.	3.0 (for 125v) 3.9 (for 300v)	-	-
Components on a printed wiring board buried in potting compound	-	0.8	0.8

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

1. These LED power supplies comply with other than class 2 requirements
2. These products are provided with the following electrical ratings:

Model	Input (ac)			Output (dc)	
	V	A	Hz	V	A
HLG-150-12 HLG-150-12A HLG-150-12B	100-240	1.7	50/60	12	12.5
HLG-150H-12 HLG-150H-12A HLG-150H-12B HLG-150H-12AB	100-240 277	1.7 0.7	50/60	12	12.5
HLG-150-15 HLG-150-15A HLG-150-15B	100-240	1.7	50/60	15	10
*HLG-150H-15 HLG-150H-15A HLG-150H-15B HLG-150H-15AB	100-240 277	1.7 0.7	50/60	15	10
HLG-150-20 HLG-150-20A HLG-150-20B	100-240	1.7	50/60	20	7.5
HLG-150H-20 HLG-150H-20A HLG-150H-20B HLG-150H-20AB	100-240 277	1.7 0.7	50/60	20	7.5
HLG-150-24 HLG-150-24A HLG-150-24B	100-240	1.7	50/60	24	6.3
HLG-150H-24 HLG-150H-24A HLG-150H-24B HLG-150H-24AB	100-240 277	1.7 0.7	50/60	24	6.3
HLG-150-30 HLG-150-30A HLG-150-30B	100-240	1.7	50/60	30	5
HLG-150H-30 HLG-150H-30A HLG-150H-30B HLG-150H-30AB	100-240 277	1.7 0.7	50/60	30	5

*

HLG-150-36 HLG-150-36A HLG-150-36B	100-240	1.7	50/60	36	4.2
HLG-150H-36 HLG-150H-36A HLG-150H-36B HLG-150H-36AB	100-240 277	1.7 0.7	50/60	36	4.2
HLG-150-42 HLG-150-42A HLG-150-42B	100-240	1.7	50/60	42	3.6
HLG-150H-42 HLG-150H-42A HLG-150H-42B HLG-150H-42AB	100-240 277	1.7 0.7	50/60	42	3.6
HLG-150-48 HLG-150-48A HLG-150-48B	100-240	1.7	50/60	48	3.2
HLG-150H-48 HLG-150H-48A HLG-150H-48B HLG-150H-48AB	100-240 277	1.7 0.7	50/60	48	3.2
HLG-150-54 HLG-150-54A HLG-150-54B	100-240	1.7	50/60	54	2.8
HLG-150H-54 HLG-150H-54A HLG-150H-54B HLG-150H-54AB	100-240 277	1.7 0.7	50/60	54	2.8
HLG-185-12 HLG-185-12A HLG-185-12B	100-240	1.8	50/60	12	13
HLG-185H-12 HLG-185H-12A HLG-185H-12B HLG-185H-12AB	100-240 277	1.8 0.7	50/60	12	13
HLG-185-15 HLG-185-15A HLG-185-15B	100-240	2.1	50/60	15	11.5
HLG-185H-15 HLG-185H-15A HLG-185H-15B HLG-185H-15AB	100-240 277	2.1 0.8	50/60	15	11.5
HLG-185-20 HLG-185-20A HLG-185-20B	100-240	2.1	50/60	20	9.3

HLG-185H-20 HLG-185H-20A HLG-185H-20B HLG-185H-20AB	100-240 277	2.1 0.8	50/60	20	9.3
HLG-185-24 HLG-185-24A HLG-185-24B	100-240	2.1	50/60	24	7.8
HLG-185H-24 HLG-185H-24A HLG-185H-24B HLG-185H-24AB	100-240 277	2.1 0.8	50/60	24	7.8
HLG-185-30 HLG-185-30A HLG-185-30B	100-240	2.1	50/60	30	6.2
HLG-185H-30 HLG-185H-30A HLG-185H-30B HLG-185H-30AB	100-240 277	2.1 0.8	50/60	30	6.2
HLG-185-36 HLG-185-36A HLG-185-36B	100-240	2.1	50/60	36	5.2
HLG-185H-36 HLG-185H-36A HLG-185H-36B HLG-185H-36AB	100-240 277	2.1 0.8	50/60	36	5.2
HLG-185-42 HLG-185-42A HLG-185-42B	100-240	2.1	50/60	42	4.4
HLG-185H-42 HLG-185H-42A HLG-185H-42B HLG-185H-42AB	100-240 277	2.1 0.8	50/60	42	4.4
HLG-185-48 HLG-185-48A HLG-185-48B	100-240	2.1	50/60	48	3.9
HLG-185H-48 HLG-185H-48A HLG-185H-48B HLG-185H-48AB	100-240 277	2.1 0.8	50/60	48	3.9
HLG-185-54 HLG-185-54A HLG-185-54B	100-240	2.1	50/60	54	3.45
HLG-185H-54 HLG-185H-54A HLG-185H-54B HLG-185H-54AB	100-240 277	2.1 0.8	50/60	54	3.45

3. These products shall be enclosed in the end product.
4. These products are suitable for use in dry, damp and wet locations.

*

5. These products are suitable for factory wiring only.

6. The suitability of input, output and grounding connections shall be determined in each end use application.

Model	Input leads	Output leads
HLG-150H-YA HLG-150H-Y HLG-150-YA HLG-150-Y HLG-185H-YA HLG-185H-Y HLG-185-YA HLG-185-Y	Type SJTW, SJOW (when used in dry, damp and wet locations), SJT or SVO, SVT or SVO (only when used in dry and damp locations), No. min. 18 AWG/3C, rated min. 105°C, VW-1.	Type SJTW, SJOW, SVT or SJT, SVO, No. min. 18 AWG/2C, rated min. 105°C, VW-1.
HLG-150H-YB HLG-150-YB HLG-150H-YAB HLG-185H-YB HLG-185-YB HLG-185H-YAB	Type SJTW, SJOW (when used in dry, damp and wet locations), SJT or SVO, SVT or SVO (only when used in dry and damp locations), No. min. 18 AWG/3C, rated min. 105°C, VW-1.	Two provided. Type SJTW, SJOW, SVT, SJT or SVO, rated min. 300 V, min. 105°C, VW-1, No. min. 18 AWG/2C for output cord and min.18 AWG/2C for current sensing connection

7. When used in wet locations, these products are only suitable for use with fixed portable (not portable) end products.

CONSTRUCTION DETAILS:

General - See the Sec. General.

Printed Wiring Boards (PWB) - All PWBs, unless otherwise specified in the description are R/C (ZPMV2), rated min V-1, min. 105°C.

Soldered Connections - All connections are mechanically secured before soldering.

*

Grounding/Bonding - All accessible dead-metal parts are bonded together by screws or rivets to the frame of the unit.

Markings - In addition to the Section General, the following markings shall be also marked on the unit.

1. Company Name, File No., or Trade Mark (if authorized).
2. Model Designation.
3. Optional - Date Code.
4. Optional - Electrical Ratings.
5. Optional - "Suitable For dry, damp and wet locations".
6. Optional - The Polarity of the Input and Output Connections.
7. Optional - Maximum Ambient Temperature: **50 °C**.

LED Power Supplies, Models HLG-150, HLG-185 - FIG 1-2

General - Description below represents all models unless specifically noted otherwise. The Recognition below applies to models with input ratings of 100-277 V. FIG. 1 and 2 the overall view of the units.

1. Enclosure - Painted aluminum, min 1.8 mm thick, four-piece construction secured together by screws, overall dimensions min 220 by 68 by 38mm.
2. Input Cord - Listed (ZJCZ, ZJCZ7), non-detachable 3 conductors flexible cord, Type **SVT, SVO, STO, SJT, SJTW, SJOW or STW** (when units are marked for indoor use) or **SJTW, SJOW or STW** (when units are marked for indoor or outdoor use), rated min. 18 AWG, min.105°C, VW-1, one end mechanically secured and soldered to PWB. Grounding conductor terminated and mechanically secured to metal enclosure and then mechanically secured and soldered to PWB.
3. Output Cord - Listed (ZJCZ, ZJCZ7), non-detachable flexible cord, two conductors flexible cord, Type **SVT, SVO, STO, SJT, SJTW, SJOW or STW** rated min. 18 AWG, min. 105°C, VW-1, one end mechanically secured and soldered on PWB.
4. Insulation (liner) Sheet - R/C (QMFZ2), min 0.25 mm thick, rated min. V-2, 105 °C, provided as liner between PWB and inside bottom and inside side walls of the enclosure, see ILL. 1 for overall shape.

Alternate - R/C (OANZ2), min. V-2, min. 105°C, min. 0.20 mm thick, completely wraps around the circuit board.

*LED Power Supplies, Models HLG-~~150xx~~, HLG-~~185xx~~ FIG. 3-5

General - Fig. 3-5 shows the internal view of the units.

1. Printed Wiring Board - R/C (ZPMV2), rated min. V-1, min. 130°C. See ILL. 2 for component and trace layout.
2. Fuse (FS1) - R/C (JDYX2), CN, Conquer Electronics Co. Ltd., Type MST, rated **3.15 A or 4 A**, 300 V.

Alternate - Same as above except, Listed, CN, rated max **3.15 A or 4 A**, min. 300 V.

3. X-Capacitors (C1, C2) -R/C (FOKY2, FOKY8), or CSA Certified, rated min. 277 V ac, max. 0.82uF.
4. Bleeder Resistors (R1, R2, R3) - Rated Max. 330k ohms, min 1/4 W.
5. Choke (L2) -Open-type construction, Core: Ferrite, measured overall 26.5 mm by 19 mm by 22.5 mm . Coil: R/C (OBMW2), rated min. 130°C
6. Choke (LF2) - Open-type construction, Core: Ferrite, measured overall 14.1 mm OD by 6.6 mm ID by 6.3 mm wide. Coil: R/C (OBMW2), rated min. 130°C.
7. Choke (LF3) - Optional, Open-type construction, Core: Ferrite, measured overall 16 mm OD by 12 mm ID by 8 mm wide. Coil: R/C (OBMW2), rated min. 130°C.
8. Inductor (L1) - Optional Open-type construction, Core: Ferrite, measured overall 17.27 mm OD by 9.65 mm ID by 6.35 mm wide. Coil: R/C (OBMW2), rated min. 130°C.
9. Capacitors (C3, C4, C24, C30) -, Line-to-Ground, Murata Mfg Co., Ltd. , type KX or KH, C3 and C4 rated max. 1000pF, **min.** 250 V ac, C24 rated max. 100 pF, min.250 V ac , C30 rated max. 470 pF, min. 250 V a

Alternate - Same as above, except by TDK Corp., type CD, CS

Alternate - same as above, except by Walsin Technology Corp., type AC or AH,

10. Bridge Rectifier (BD1) - rated min. 500 V, min. 4 A secured to Heat Sink by screw.
11. Varistor (ZNR1) - Optional - R/C (VZCA2), CN, rated max. 320Vac
12. Varistor (ZNR2) - Optional - R/C (VZCA2), CN, rated max. 230V ac,
13. Capacitor (C5) - Electrolytic type, rated min 400 V, 100 μ F, min 105°C.
15. Transistor (Q1) - Rated min. 500 V, min 12 A
16. Thermistor (RTH1) -Optional, Rated min. 2A , max. 20 Ohm .
17. Optical Isolators (U3, U4) - R/C (FPQU2), CN, Sharp Corp Electronic Components Group, Type PC123, rated 5000 V ac isolation voltage.
- Alternate - Same as above except R/C (FPQU2, FPQU8), Cosmo Electronics Corp., Type K1010, rated 5000 V ac isolation voltage.
- Alternate - Same as above except R/C (FPQU2, FPQU8), Lite-on Technology Corp., Type LTV817, **LTV-817M**,rated 5000 V ac isolation voltage.
- Alternate - Same as above except R/C (FPQU2), CN, NEC Compound Semiconductor Devices Ltd., Type PS2561-1, rated 5000 V ac isolation voltage.
- Alternate - Same as above except R/C (FPQU2, FPQU8), Isocom Ltd., Type ISP621 or ISP817, rated 5000 V ac isolation voltage
18. Bridge Capacitor (C31) - Optional, Manufactures shown below, rated max. 1000 pF, min. 250 V ac. Marked "Y1".

Manufacturer	Type
Murata Mfg Co.	KX
Walsin Technology Corp	AH
TDK Corp	CD

19. Transformer (T1) - Class A. See below for details

Constructed as follow:

- A. Core - Ferrite core, core measured 33 by 40.6 by 14 mm thick, core served as primary part.
- B. Bobbin - R/C (QMFZ2), Sumitomo Bakelite Co. Ltd. (E41429), Type PM-9820, rated V-0, 150°C, min. 0.51 mm thick.
- C. Windings - Enameled copper magnet wire, R/C (OBMW2), rated min. 130°C random wound.
- D. Triple Insulated Winding - R/C (OBTJ2), ToKoKu Electric Co., LTD, Type TIW-2X. rated min. 130°C
- E. Insulation Tape - R/C (OANZ2), Minnesota Mining & Mfg Co., Type 1350F-1, 1350T-1 1351-1 ,1318-1 rated 130°C.

Alternate - R/C (OANZ2), Bondtec Pacific Co Ltd , Type 370S ,rated 130°C.
- F. Insulation Tubing - R/C (YDPU2), Great Holding Industrial Co. Ltd., Type TFL/TFT, rated 200°C. Provided on all exit leads.

Alternate - Same as above, except ZEUS INDUSTRIAL PRODUCTS INC., Type TFE-TW-300, TFE-LW-150, **min.** 150V rated 200°C

G. See table below for winding and Insulation details.

Model	Windings and insulation
HLG-150-12, HLG-150-12A, HLG-150-12B, HLG-185-12, HLG-185-12A, HLG-185-12B	See ILL. 3 (part # TF-2016)
HLG-150-15, HLG-150-15A, HLG-150-15B, HLG-185-15, HLG-185-15A, HLG-185-15B	See ILL. 4 (part # TF-2017)
HLG-150-20, HLG-150-20A, HLG-150-20B, HLG-185-20, HLG-185-20A, HLG-185-20B	See ILL. 5 (part # TF-2018)
HLG-150-24, HLG-150-24A, HLG-150-24B, HLG-185-24, *HLG-185-24A, HLG-185-24B	See ILL. 7 (part # TF-1999)
*HLG-150-30, HLG-150-30A, HLG-150-30B, HLG-185-30, HLG-185-30A, HLG-185-30B	See ILL. 8 (part # TF-2019)
*HLG-150-36, HLG-150-36A, HLG-150-36B, HLG-185-36, HLG-185-36A, HLG-185-36B	See ILL. 6 (part # TF-2020)
HLG-150-42, HLG-150-42A, HLG-150-42B, HLG-185-42, HLG-185-42A, HLG-185-42B	See ILL. 9 (part # TF-2021)
HLG-150-48, HLG-150-48A, HLG-150-48B, HLG-185-48, HLG-185-48A, HLG-185-48B, HLG-150H-54, HLG-150H-54A, HLG-150H-54B, HLG-185H-54, HLG-185H-54A, HLG-185H-54B, HLG-150H-54AB, HLG-185H-54AB	See ILL. 10 (part # TF-2022)
HLG-150-54, HLG-150-54A, HLG-150-54B, HLG-185-54, HLG-185-54A, HLG-185-54B	See ILL. 11 (part # TF-2023)
HLG-150H-12, HLG-150H-12A, HLG-150H-12B, HLG-185H-12, HLG-185H-12A, HLG-185H-12B, HLG-150H-12AB, HLG-185H-12AB	See ILL. 12 (part # TF-2063)
HLG-150H-15, HLG-150H-15A, HLG-150H-15B, HLG-185H-15, HLG-185H-15A, HLG-185H-15B, HLG-150H-15AB, HLG-185H-15AB	See ILL. 13 (part # TF-2063)
HLG-150H-20, HLG-150H-20A, HLG-150H-20B, HLG-185H-20, HLG-185H-20A, HLG-185H-20B, HLG-150H-20AB, HLG-185H-20AB	See ILL. 14 (part # TF-2064)
HLG-150H-24, HLG-150H-24A, HLG-150H-24B, HLG-185H-24, HLG-185H-24A, HLG-185H-24B, HLG-150H-24AB, HLG-185H-24AB	See ILL. 15 (part # TF-2065)
HLG-150H-30, HLG-150H-30A, HLG-150H-30B, HLG-185H-30, HLG-185H-30A, HLG-185H-30B, HLG-150H-30AB, HLG-185H-30AB	See ILL. 16 (part # TF-2066)
HLG-150H-36, HLG-150H-36A, HLG-150H-36B, HLG-185H-36, HLG-185H-36A, HLG-185H-36B, HLG-150H-36AB, HLG-185H-36AB	See ILL. 17 (part # TF-2067)
HLG-150H-42, HLG-150H-42A, HLG-150H-42B, HLG-185H-42, HLG-185H-42A, HLG-185H-42B, HLG-150H-42AB, HLG-185H-42AB	See ILL. 18 (part # TF-2068)
HLG-150H-48, HLG-150H-48A, HLG-150H-48B, HLG-185H-48, HLG-185H-48A, HLG-185H-48B, HLG-150H-48AB, HLG-185H-48AB	See ILL. 19 (part # TF-2069)

20. Potting Compound - R/C (QMFZ2), SHIN-ETSU SILICONE TAIWAN CO LTD. (E174951), Type KET-132 A/B, nc color, V-0, rated 105°C, min. 1.0 mm thick. Fully filled with the unit.
- Alternative: R/C (QMFZ2), Dow Corning Corp. (E40195), Type SYLGARD 160, gray color, V-0, rated 105°C, min. 1.5 mm thick.
- Alternate: R/C (QMFZ2), GUANGZHOU HUITIAN FINE CHEMICAL LTD. (E306078), Type 5299, gray color, V-0, rated 105°C, min. 1.0 mm thick. Fully filled with the unit.
21. HS1 - Aluminum, min. 3.0 mm thick, overall dimension min. 52.5 by 23 mm.
22. HS2 - Aluminum, min. 2.0 mm thick, overall dimension min. 22.5 by 35.75 by 23 mm.
23. HS3 - Aluminum, min. 2.0 mm thick, overall dimension min. 23 by 36mm.

MODELS HLG-150-YA, HLG-150H-YA, HLG-185-YA and HLG-185H-YA

General - Models HLG-150-YA, HLG-150H-YA, HLG-185-YA and HLG-185H-YA are similar to HLG-150-Y, HLG-150H-Y, HLG-185-Y and HLG-185H-Y respectively except as noted below.

1. Enclosure - Painted aluminum, min 1.8 mm thick, four-piece construction secured together by screws, overall dimensions min 220 by 68 by 38mm. Top enclosure has two openings each 10.5mm diameter.
2. Topper - PVC bushing. Outer portion measures 10.5 mm diameter, provided two at the openings of top enclosure.

MODELS HLG-150-YB, HLG-150H-YB, HLG-185-YB and HLG-185H-YB

General - These units are the same as the LG-150-Y, HLG-150H-Y, HLG-185-Y and HLG-185H-Y respectively except as noted below.

- 1) Dimming Circuit - provided at the secondary side of the circuit inside the unit.
- 2) Dimming Circuit - Same as above, except the Dimming circuit leads extend outside on the secondary side of the unit, the leads are R/C AVL2/AVLV8), rated min. 80°C, min. 300V, min. 18 AWG/2C.

Alternate - Same as above except for Listed (ZJCZ, ZJCZ7), Type SVT, SVO, STO, SJT, SJTW, SJOW or STW, rated min. 300 V, min. 80°C, 18 AWG/2C.

MODELS HLG-150-YAB, HLG-150H-YAB, HLG-185-YAB and HLG-185H-YAB

General - Models HLG-150-YAB, HLG-150H-YAB, HLG-185-YAB and HLG-185H-YAB are similar to HLG-150-YB, HLG-150H-YB, HLG-185-YB and HLG-185H-YB respectively except as noted below

1. Enclosure - Painted aluminum, min 1.8 mm thick, four-piece construction secured together by screws, overall dimensions min 192 by 68 by 38 mm. Top cover has one 10.5mm diameter opening.
2. Topper - PVC bushing. Outer portion measures 10.5 mm diameter, provided one at the opening of top enclosure.

23. HS3 - Aluminum, min. 2.0 mm thick, overall dimension min. 23 by



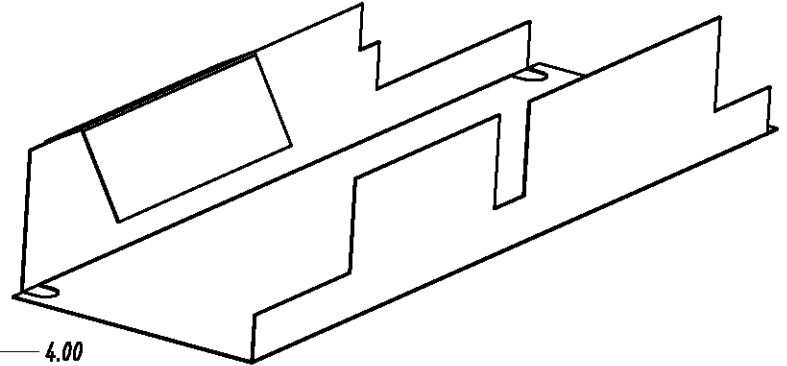
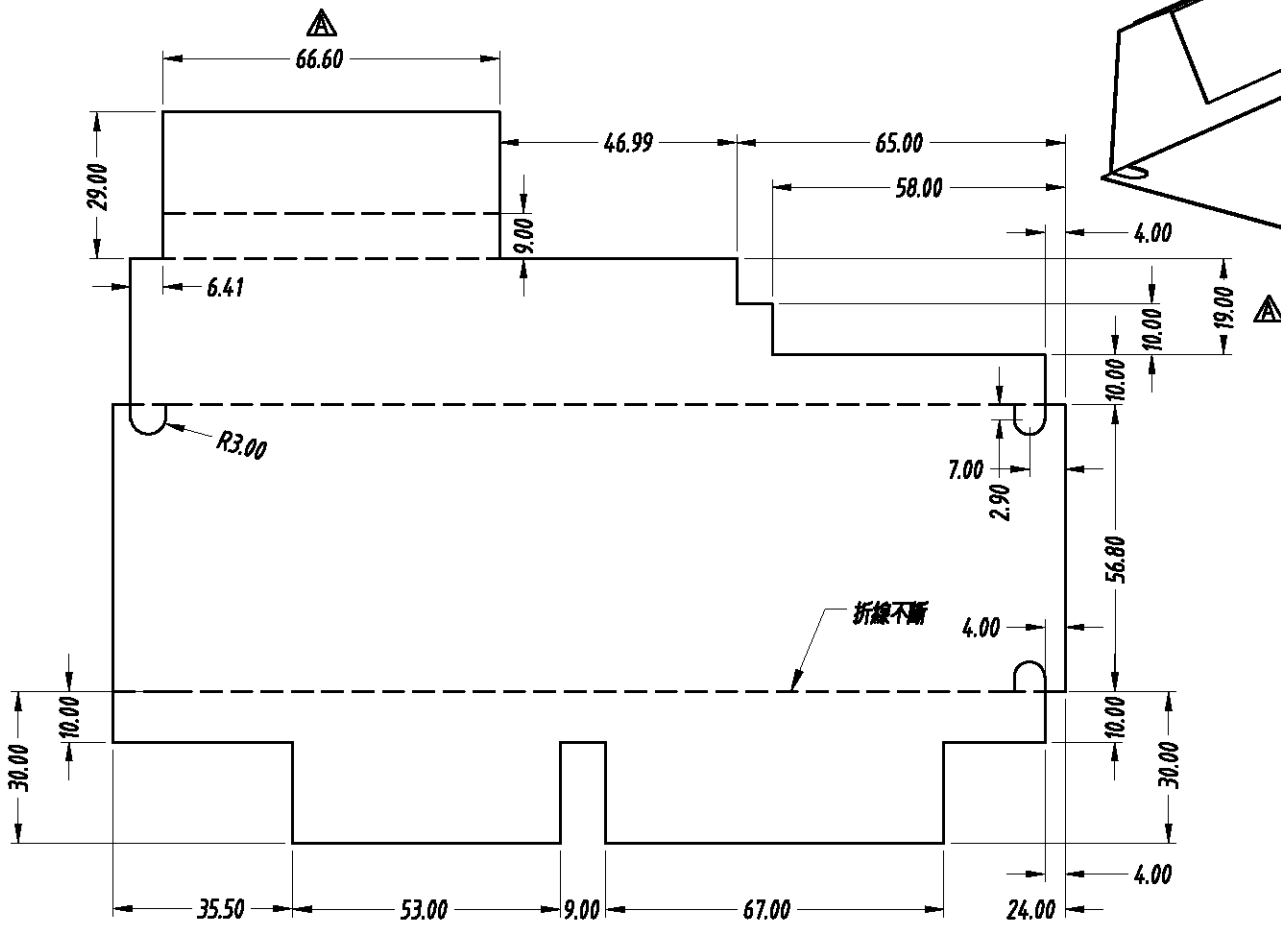




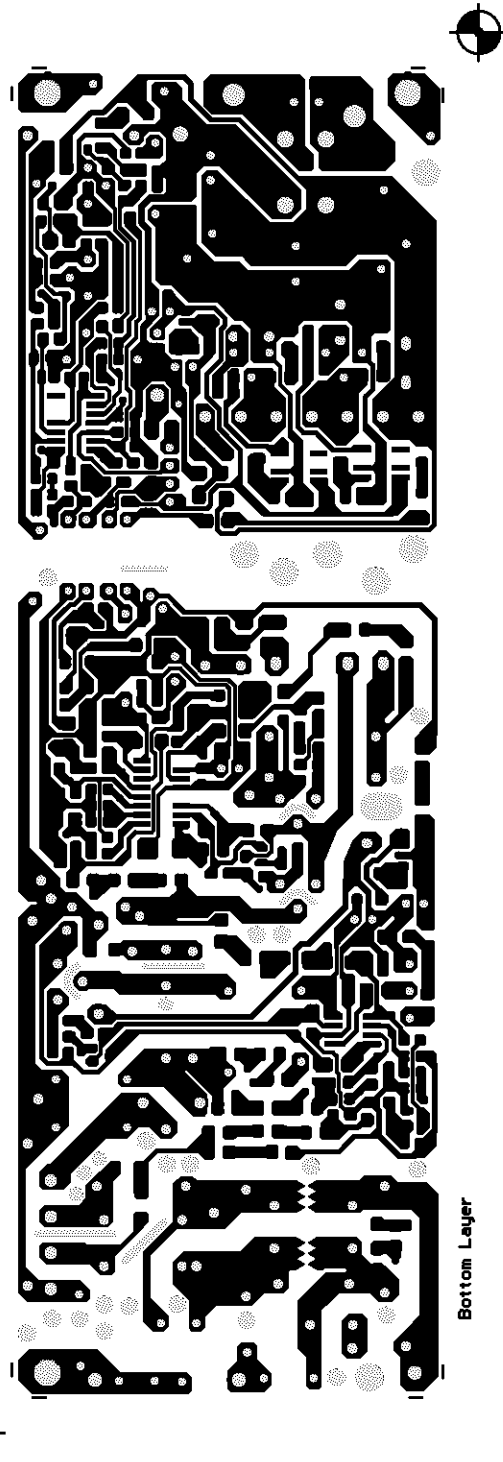


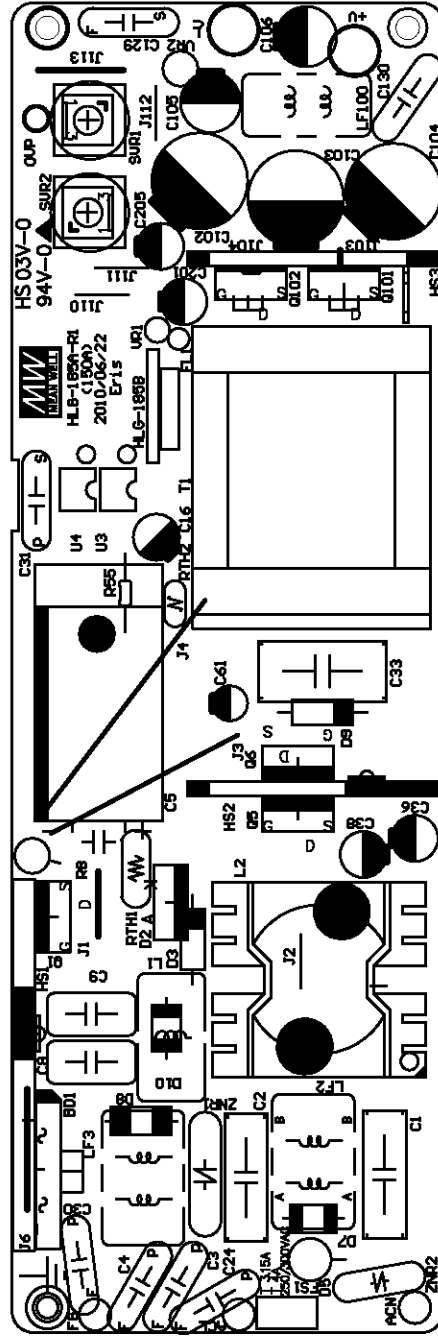


REV.	DESCRIPTION	ECN. CORE	DATE
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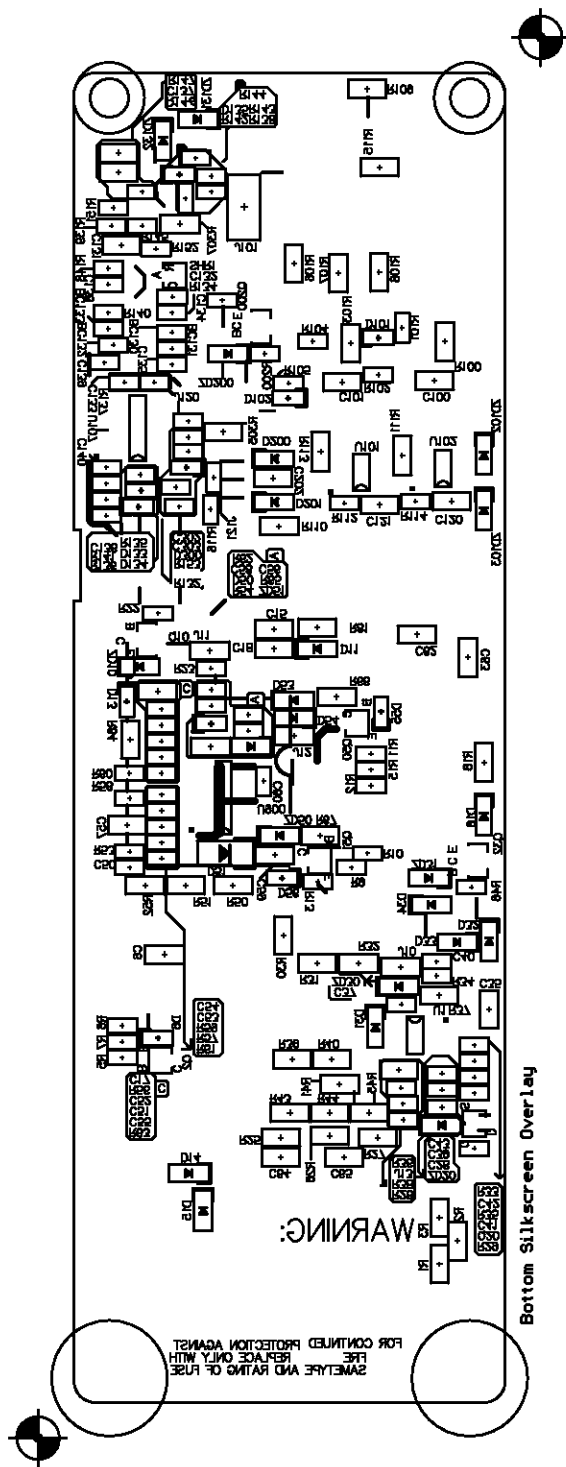


	MATERIAL: FORMAX GK-10BK t=0.25mm		DWG NAME: MYLAR	
	FINISH:		SCALE: 1:1	DWG. NO: HLG-120
UNIT: mm	APPROVAL	DESIGNED	CHECKED	DRAWING
NOTE:	<small>TR1 4 to 10mm 50 to 100mm 100 to 250mm</small>		P/NO: 1HH2954H DATE: 2010-06-21 SHEET: 1 OF 1 REV. R1	





Top Silkscreen Overlay



客戶名稱: 明緯企業股份有限公司

承認書

APPROVAL SHEET

客戶料號: TF-2016-R0

CUSTOMER PARTS NO.

品名: TRANSFORMER

PARTS NAME

規格: LP-3320 H (14P) 1.6~1.8 mH

SPECIFICATION

昱京料號: LP-33A41

YU JING PARTS NO.



版本: 第1.1版

REVISION NO.

承認欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

昱京科技股份有限公司
YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
NO.192,LUNG EN ST.,SANXAI
TOWN,TAIPEI HSIEN,R.O.C
TEL:02-2672-3910, 2674-1740
FAX:02-2672-4872, 8671-7792

昱京國際貿易有限公司
YU JING INTERNATIONAL CO.,LTD.
東莞塘廈昱京電子廠
DONG GUAN,TANGXIA,YU JING ELECTRONIC
MANUFACTORY
東莞市塘廈鎮高麗工業區高麗三路3之1號
NO.3-1,GAO LI ROAD,GAO LI INDUSTRY,
TANGXIA TOWN,DONG GUAN CITY,CHINA
TEL:+86-0769-87902089~91
FAX:+86-0769-87903917

單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		陳丹丹	2010.05.21

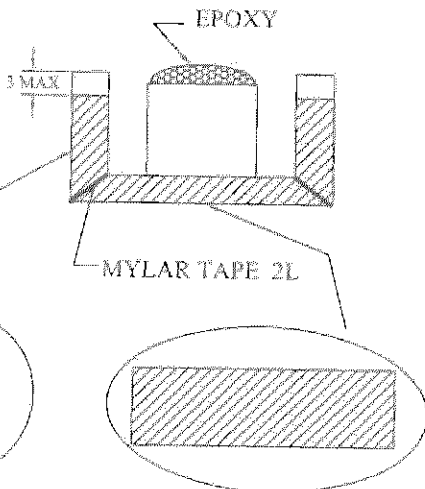
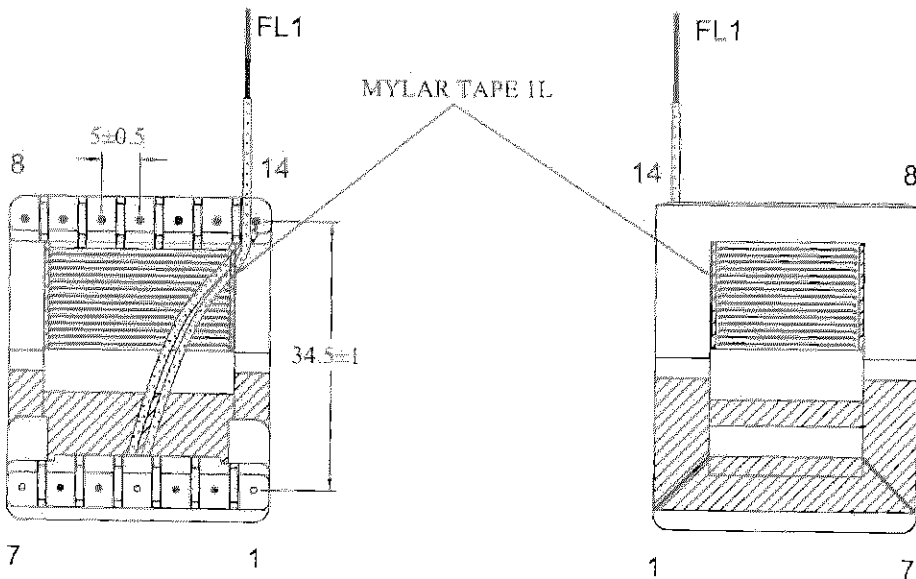
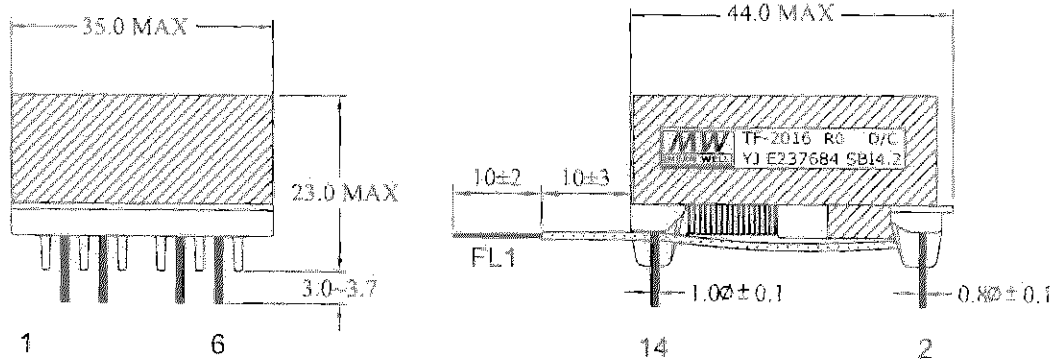




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2016-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A4I	DATE	2010-05-21	REV.	1.1	SHEET 2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN1,4,7 CUT OFF.
2. 初級CORE需用25mm MYLAR TAPE包面2L.
3. 初級BOBBIN加裝護套後再組裝鐵芯.
4. CORE中柱點膠且初級與次級組裝要緊密.
5. GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
6. 錫點勿超出BOBBIN支點.
7. FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

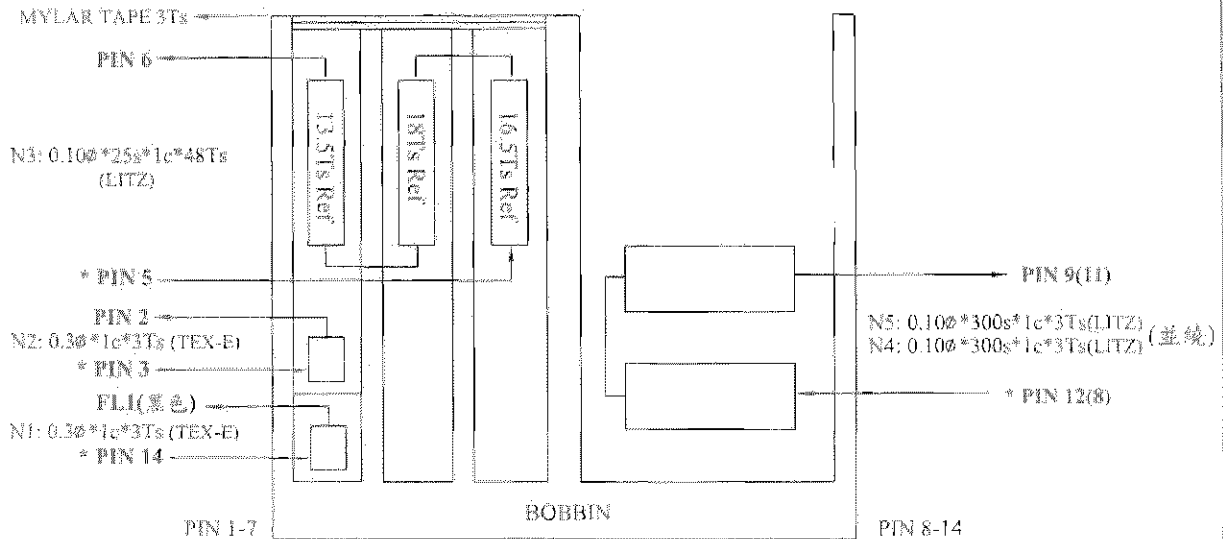
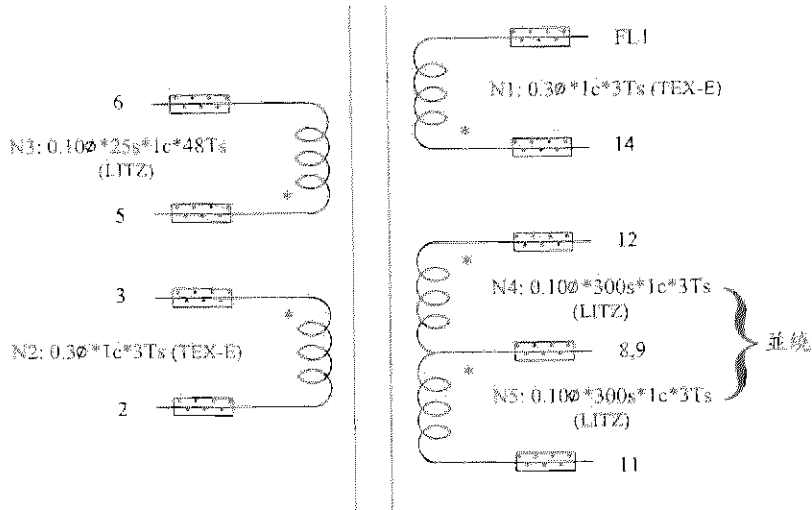
SOLDER
 MYLAR TAPE



SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2016-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A4I	DATE	2010-05-21	REV.	1.1	SHEET 3 OF 4

2.WINDING ORDER



NOTE:

1. 一次側BOBBIN PIN朝向機台內繞製, 二次側BOBBIN PIN朝向機台外繞製.
2. 出入線加TEFLON TUBE.
3. N1, N2用三層絕緣線繞製.
4. N1繞於初級BOBBIN靠PIN端槽且于PIN4處出入線(FL1加黑色TEFLON TUBE).
5. N4, N5為雙組並繞密繞, N4由PIN12進PIN9出, N5由PIN8進PIN11出.
5. 一次側線包包MYLAR TAPE 3Ts后再組裝, 然后將繞于一次側N1的入線插至PIN14, FL1插至PIN14旁.





SPECIFICATION

CUSTOMER	明 緯	PART NO.	TF-2016-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A41	DATE	2010-05-21	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	55 Max
N3	5	6	0.100*25s*1c(LITZ)	Y	48±0.5	1.6~1.8 mH	200 Max
N4	12	9	0.100*300s*1c(LITZ)	Y	3±0.5	5.6~9.6uH	3 Max
N5	8	11	0.100*300s*1c(LITZ)	Y	3±0.5	5.6~9.6uH	3 Max
Lk	5	6	0.100*25s*1c(LITZ)	Y	48±0.5	203~216 uH	@PINS,9,11,12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5. MATERIAL LIST Class B Insulation System:SB14.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承認書

APPROVAL SHEET

客戶料號: TF-2017-R0

CUSTOMER PARTS NO.

品名: TRANSFORMER

PARTS NAME

規格: LP-3320 H (14P) 1.16~1.32 mH

SPECIFICATION

昱京料號: LP-33A40

YU JING PARTS NO.



版本: 第1.1版

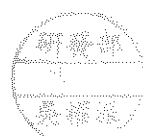
REVISION NO.

<h3>承認欄</h3>		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

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單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
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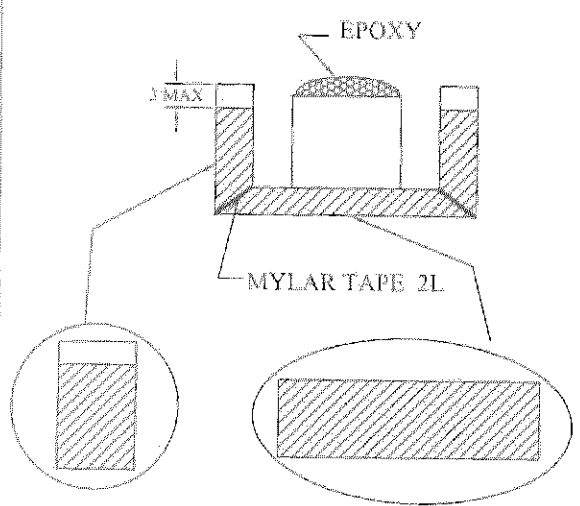
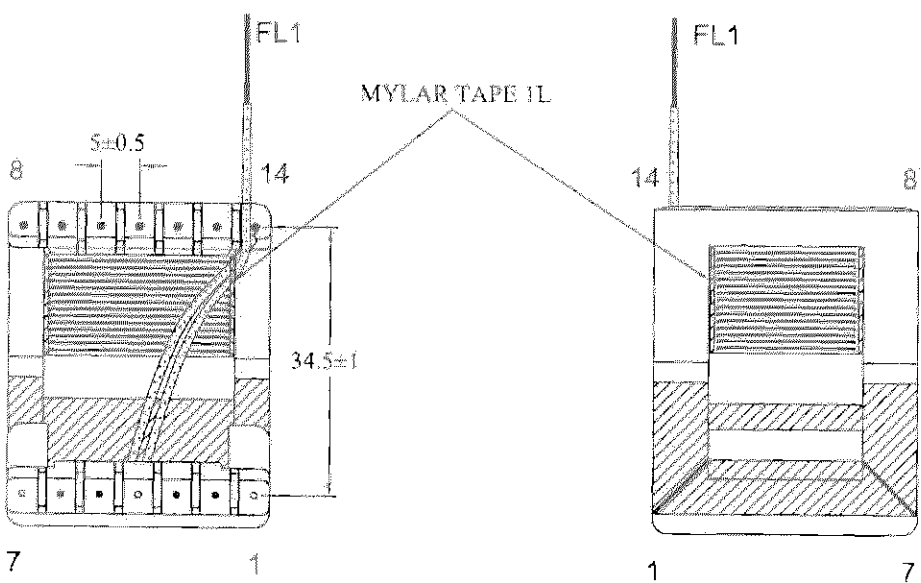
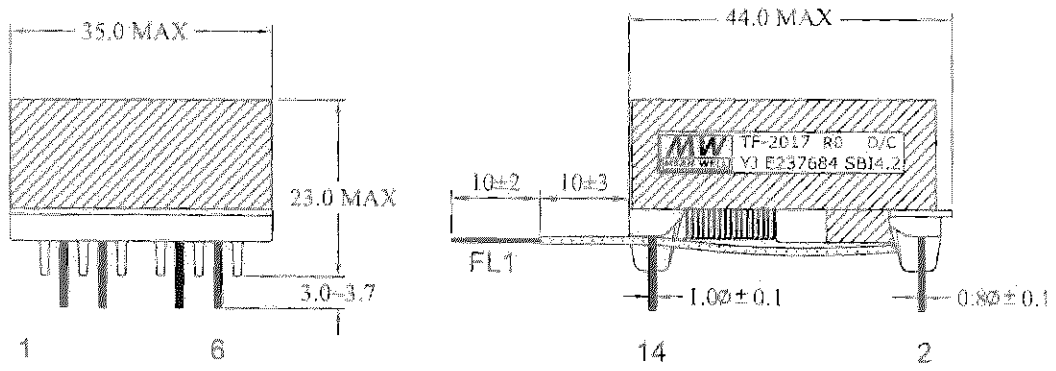




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2017-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A40	DATE	2010-05-21	REV.	1.1	SHEET	2 OF 4

I.MACHENIC DIMENSION (UNIT:mm)



- NOTE:
- PIN1,4,7 CUT OFF.
 - 初級CORE需用25mm MYLAR TAPE包面2L.
 - 初級BOBBIN加裝護套後再組裝鐵芯.
 - CORE中柱點膠且初級與次級組裝要緊密.
 - GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
 - 錫點勿超出BOBBIN支點.
 - FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

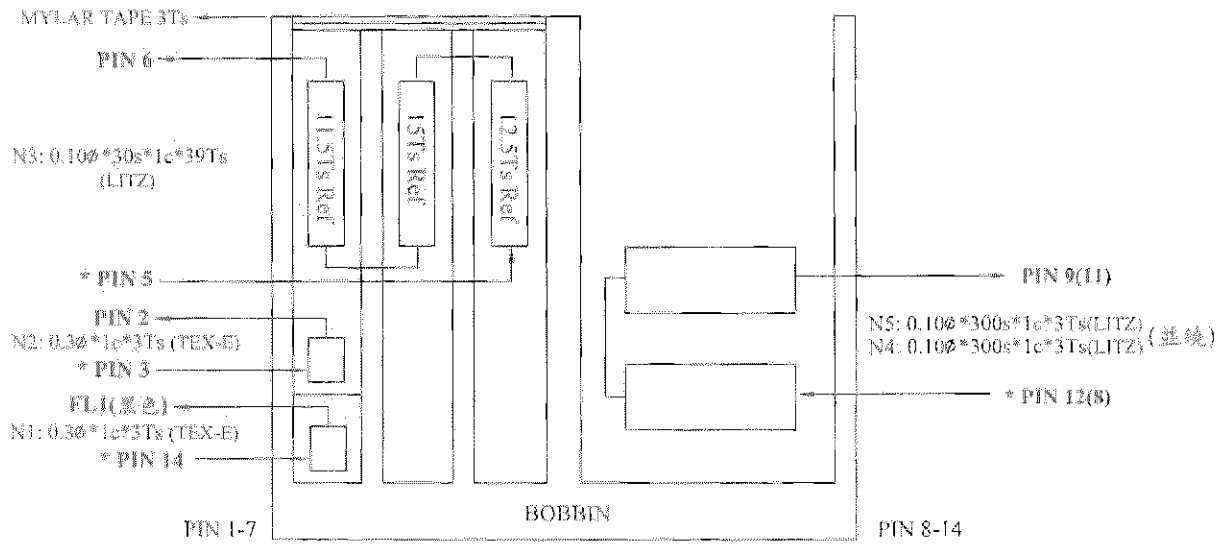
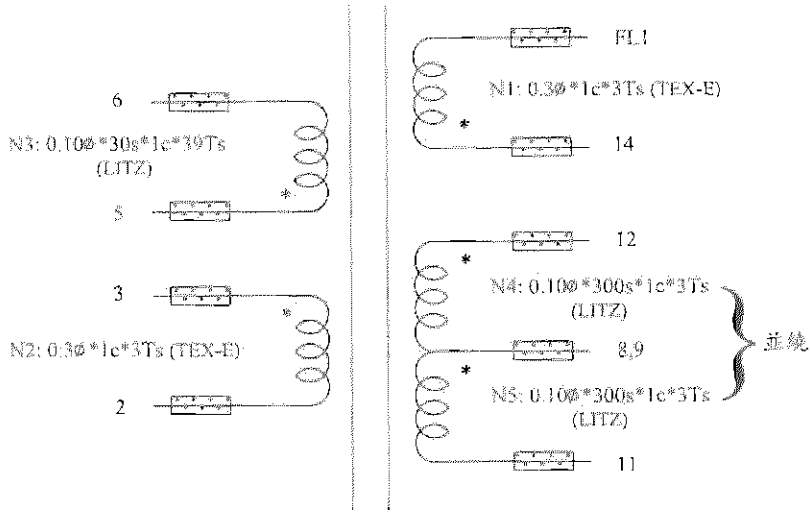
SOLDER
 MYLAR TAPE



SPECIFICATION

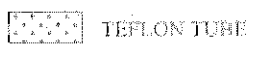
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MODEL NO.	LP-33A40	DATE	2010-05-21	REV.	1.1	SHEET 3 OF 4

2.WINDING ORDER



NOTE:

- 1.一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製。
- 2.出入線加TEFLON TUBE。
- 3.N1,N2用三層絕緣線繞製。
- 4.N1繞於初級BOBBIN靠PIN端槽且于PIN4處出入線(FL1加黑色TEFLON TUBE)。
- 5.N4,N5為雙匝並繞密繞 N4由PIN12進PIN9出,N5由PIN8進PIN11出。
- 5.一次側線包MYLAR TAPE 3Ts后再組裝,然後將繞于一次側N1的入線接至PIN14,FL1拉至PIN14旁。





SPECIFICATION

CUSTOMER	明 錄	PART NO.	TF-2017-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A40	DATE	2010-05-21	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.3 ϕ *1c(TEX-E)	Y	3 \pm 0.5	6.4~9.6uH	75 Max
N2	3	2	0.3 ϕ *1c(TEX-E)	Y	3 \pm 0.5	6.4~9.6uH	55 Max
N3	5	6	0.10 ϕ *30s*1c(LITZ)	Y	39 \pm 0.5	1.16~1.32 mH	>100 Max
N4	12	9	0.10 ϕ *300s*1c(LITZ)	Y	3 \pm 0.5	5.6~9.6uH	3 Max
N5	8	11	0.10 ϕ *300s*1c(LITZ)	Y	3 \pm 0.5	5.6~9.6uH	3 Max
Lk	5	6	0.10 ϕ *30s*1c(LITZ)	Y	39 \pm 0.5	145~154 uH	@PIN8,9,11,12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm/DC 500V.

5. MATERIAL LIST Class B Insulation System:SB14.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2932F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱：明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號：TF-2018-R0
 CUSTOMER PARTS NO.

品 名：TRANSFORMER
 PARTS NAME

規 格：LP-3320 H (14P) 1.16~1.32 mH
 SPECIFICATION

昱京料號：LP-33A39
 YU JING PARTS NO.

版 本：第1.1版
 REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

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單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
[Signature]	[Signature]	陳丹丹	2010.05.21

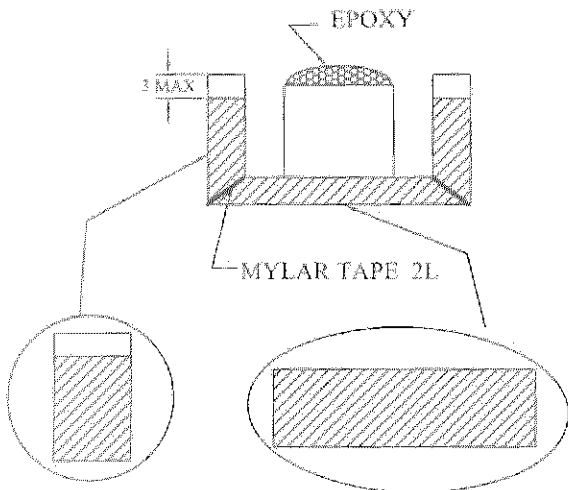
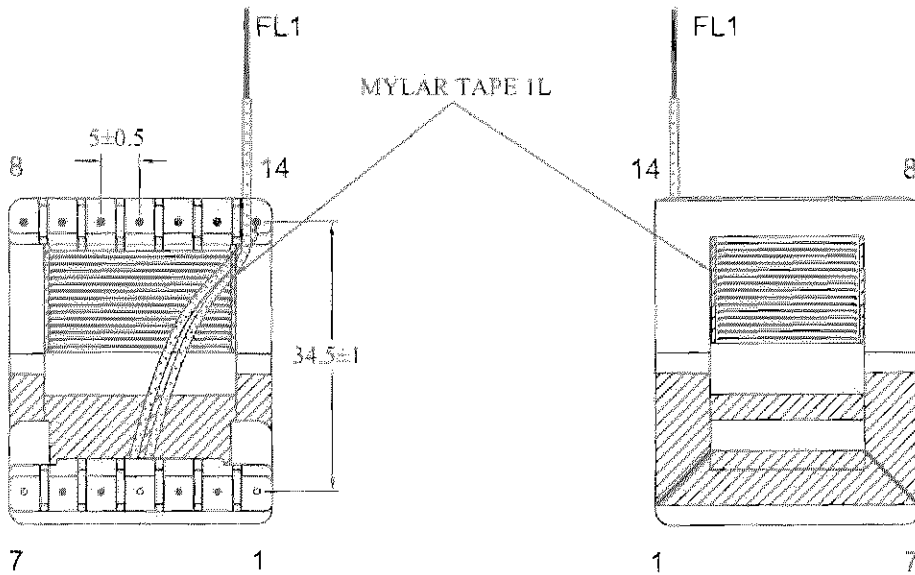
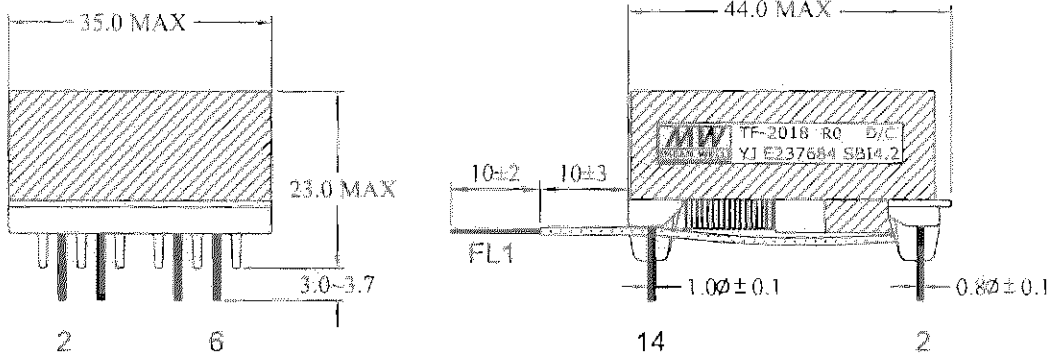




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2018-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A39	DATE	2010-05-21	REV.	1.1	SHEET	2 OF 4

1. MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN 1, 4, 7 CUT OFF.
2. 初級 CORE 需用 25mm MYLAR TAPE 包面 2L.
3. 初級 BOBBIN 加裝護套後再組裝鐵芯.
4. CORE 中柱點膠且初級與次級組裝要緊密.
5. GAP CORE 組裝於次級側, CORE 外包 MYLAR TAPE 3Ts.
6. 錫點勿超出 BOBBIN 支點.
7. FL1 (黑色 TEFLON TUBE) 出線於 PIN 14 旁, 長度如外觀圖所示.

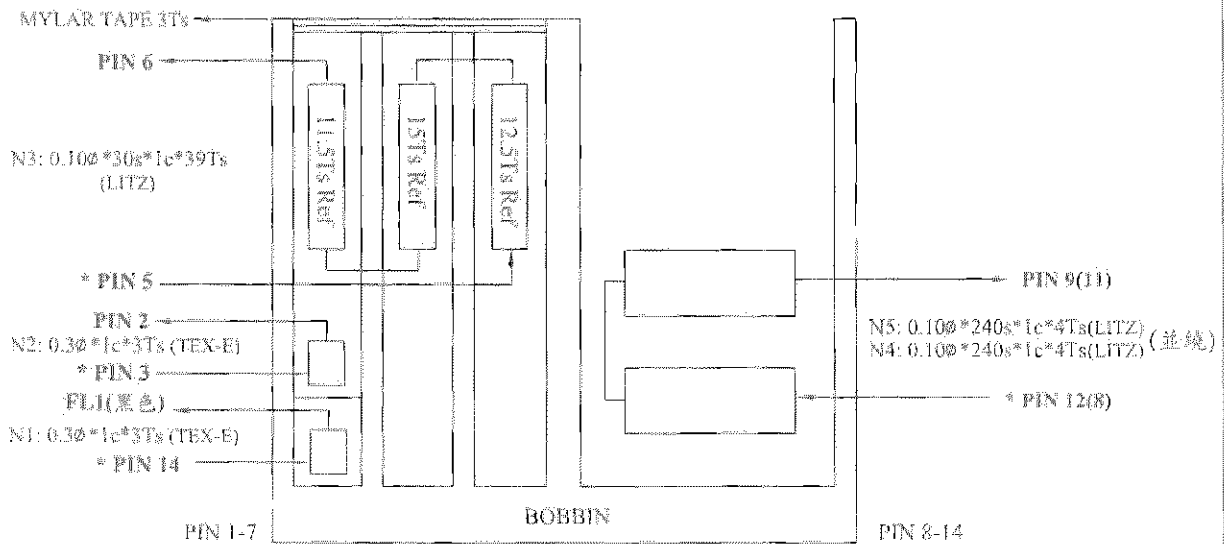
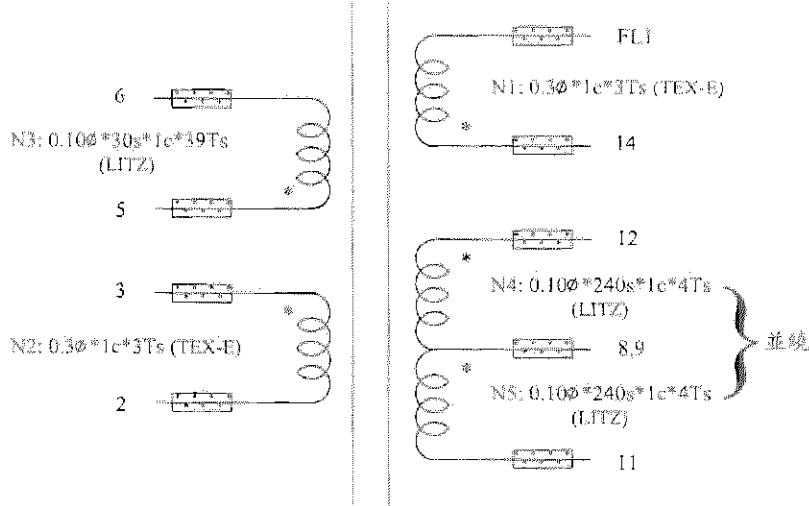
SOLDER
 MYLAR TAPE



SPECIFICATION

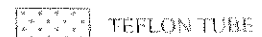
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MODEL NO.	LP-33A39	DATE	2010-05-21	REV.	1.1	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

- 1.一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
- 2.出入線加TEFLON TUBE.
- 3.N1,N2用三層絕緣線繞制.
- 4.N1繞於初級BOBBIN靠PIN端槽且于PIN4處出入線(FL1加黑色TEFLON TUBE).
- 5.N4,N5為雙組並繞密繞.N4由PIN12進PIN9出.N5由PIN8進PIN11出.
- 5.一次側線包包MYLAR TAPE 3Ts后再組裝.然后将繞于一次側N1的入線接至PIN14, FL1拉至PIN14旁.





SPECIFICATION

CUSTOMER	明 緯	PART NO.	TF-2018-R0	DESCRIPTION	LP-3320H-(14P)		
MODEL NO.	LP-33A39	DATE	2010-05-21	REV.	1.1	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V =0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.30*1c(TEX-E)	Y	3±0.5	6.4-9.6uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4-9.6uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	39±0.5	1.16-1.32 mH	200 Max
N4	12	9	0.100*240s*1c(LITZ)	Y	4±0.5	9.75-16.25uH	5 Max
N5	8	11	0.100*240s*1c(LITZ)	Y	4±0.5	9.75-16.25uH	5 Max
Lk	5	6	0.100*30s*1c(LITZ)	Y	39±0.5	145-154 uH	@PIN8,9,11,12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5.MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

廠商編號:

試樣圖面

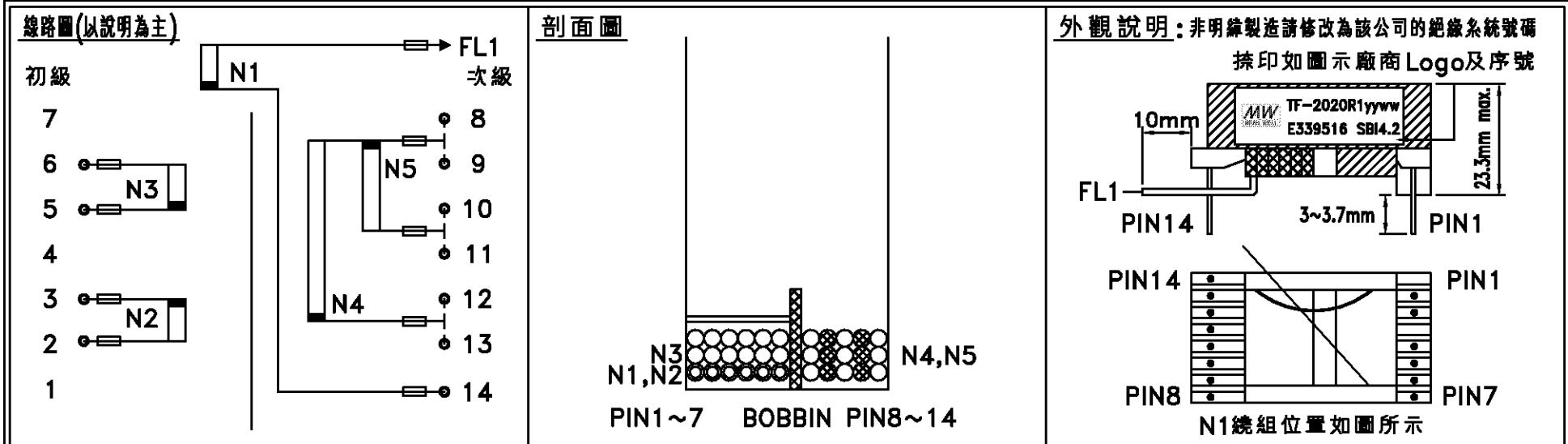
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機種:HLG-185-36

變壓器圖面

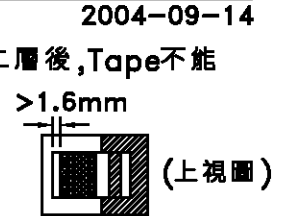
正式圖面

日期:2010-06-21



線繞層次	相位始末	線徑 (φ)	圈數 (T)	線繞方式	膠帶層數 (L)	電感 (H)	DC.R(Max.) mΩ	說明	BOBBIN	CORE	GAP	耐壓	絕緣阻抗	安規要求	修訂	審核	設計	確認	製圖	
N1	14-FL1	0.3φ	3	偏密繞	0	6.4~9.6u	75	1. 第 1,4,7 Pin除 2. 主線圈感量 5-6 $L_m=1.16mH\sim 1.32mH$ 3. 主線圈漏感5-6(N4和N5短路) $L_k=145uH\sim 154uH$ 4. N1繞組繞線於初級,引線至次級PIN腳 5. N1,N2使用三層絕緣線 出線加鐵弗龍套管 6. FL1出線於PIN14旁FL1出線長10mm,鍍錫10mm,加黑色套管 7. 所有出線加套管 8. 線材使用155°C等級(2UE+Ny) 9. N4,N5使用0.1φx130股須捲成單股繞製,勿分成兩股並繞	1. 昱京 LP-3320(Pitch=35mm)	1. LP-3320(3C94)	有 √	無	Test Frequency:50KHz/0.25V	500VDC > 100 MΩ	IEC60950-1 CLASS B	99年06月21日				
N2	3-2	0.3φ	3	偏密繞	0	6.4~9.6u	55						初級 ↔ 次級	4 KVAc 1mA/sec						
N3	5-6	0.1φ x 30	39	密繞	2	1.24m	200						初級 ↔ Core	4 KVAc 1mA/sec						
N4	12,13 -9	0.1φ x 130	7	並繞	0	32.8~49.2u	10.5						次級 ↔ Core	---KVAc mA/sec						
N5	8- 10,11	0.1φ x 130	7		0	32~48u	10.5													

- 10. E Core結合處(Core中心柱)須點軟膠
- 11. 此料號變壓器不宜列為免驗物料
- 12. 供應廠商每批均須檢附測試報告
- 13. 漏感量測時Fly線不與次級端短路
- 14. Bobbin下方(與PCB接觸處)不可有凡立水突起膠塊
- 15. 組裝鐵芯時,磨GAP之鐵芯置於次級側
- 16. N4,N5繞製時採並繞方式繞製
- 17. PIN腳吃錫要飽滿
- 18. 所有繞組不可任意更改極性
- 19. 變壓器初級側鐵芯包覆Tape二層後,Tape不能有凸點產生
- 20. 次級側Cover不裝於Bobbin上,此移除Cover空間要預留(約>1.6mm)後含浸



客戶名稱: 明 緯 企 業 股 份 有 限 公 司

承 認 書

APPROVAL SHEET

客戶料號: TF-1999-R0
CUSTOMER PARTS NO.

品 名: TRANSFORMER
PARTS NAME

規 格: LP-3320 H (14P) 1.34~1.5 mH
SPECIFICATION



昱京料號: LP-33A42
YU JING PARTS NO.

版 本: 第1.1版
REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

昱京科技股份有限公司
YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
NO.192,LUNG EN ST.,SANXAI
TOWN,TAIPEI HSIEN,R.O.C
TEL:02-2672-3910, 2674-1740
FAX:02-2672-4872; 8671-7792

昱京國際貿易有限公司
YU JING INTERNATIONAL CO.,LTD.
東莞塘廈昱京電子廠
DONG GUAN,TANGXIA,YU JING ELECTRONIC
MANUFACTORY
東莞市塘廈鎮高麗工業區高麗三路3之1號
NO.3-1,GAO LI ROAD,GAO LI INDUSTRY,
TANGXIA TOWN,DONG GUAN CITY,CHINA
TEL:+86-0769-87902089~91
FAX:+86-0769-87903917

單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		陳丹丹	2010.05.20

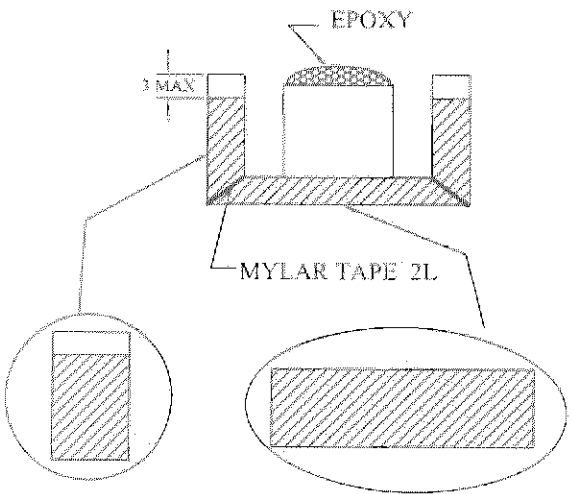
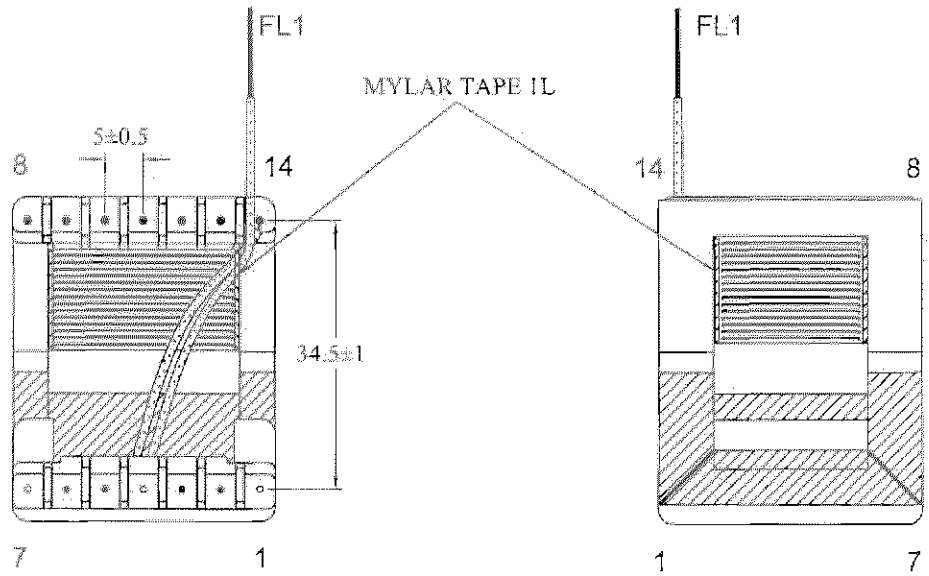
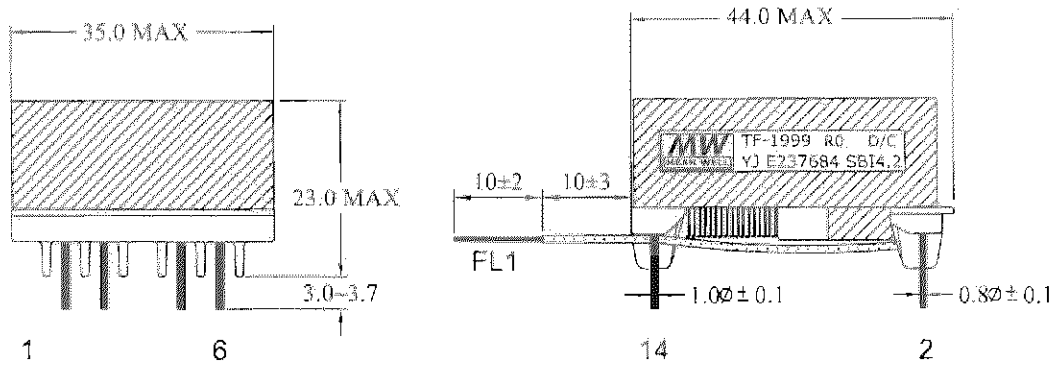




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-1999-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A42	DATE	2010-05-20	REV.	1.1	SHEET 2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



- NOTE:
- PIN 1,4,7 CUT OFF.
 - 初級CORE需用25mm MYLAR TAPE包面2L.
 - 初級BOBBIN加裝護套後再組裝鐵芯.
 - CORE中柱點膠且初級與次級組裝要緊密.
 - GAP CORE組裝於次級側; CORE外色MYLAR TAPE 3Ts.
 - 錫點勿超出BOBBIN支點.
 - FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

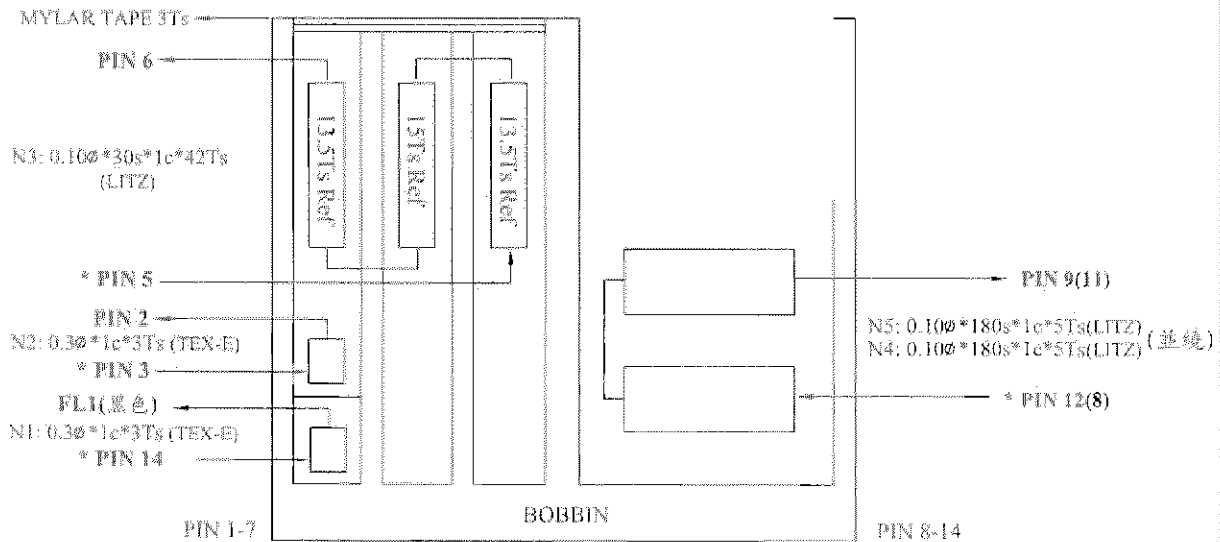
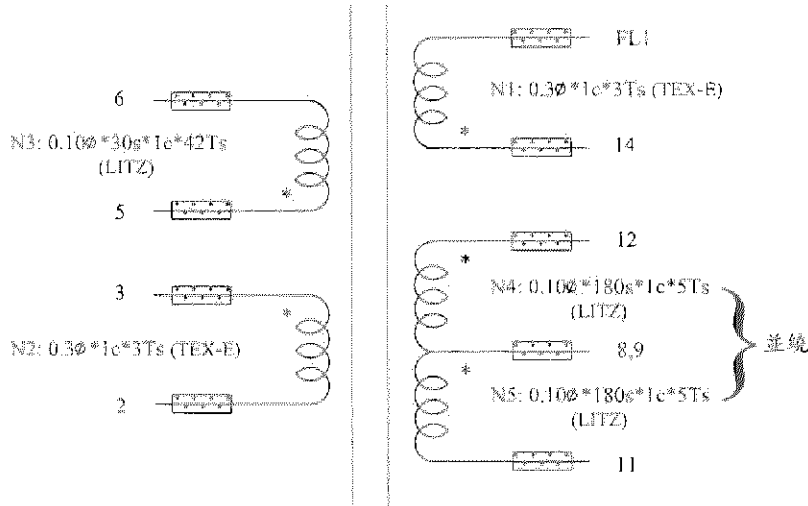
SOLDER
 MYLAR TAPE



SPECIFICATION

CUSTOMER	明 峰	PART NO.	TF-1999-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A42	DATE	2010-05-20	REV.	I.1	SHEET 3 OF 4

2.WINDING ORDER



NOTE:

- 1.一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
- 2.出入線加TEFLON TUBE.
- 3.N1,N2用三層絕緣線繞制.
- 4.N1繞於初級BOBBIN靠PIN端槽且于PIN4處出入線(FL1加黑色TEFLON TUBE).
- 5.N4,N5為雙組並繞密繞.N4由PIN12進PIN9出,N5由PIN8進PIN11出.
- 5.一次側銅線包色MYLAR TAPE 3Ts后再組裝,然后将繞于一次側N1的入線接至PIN14, FL1插至PIN14旁.





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-1999-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A42	DATE	2010-01-11	REV.	1.0	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F= 50KHz V =0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FLI	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.100*180s*1c(LITZ)	Y	5±0.5	16.8~25.2uH	7 Max
N5	8	11	0.100*180s*1c(LITZ)	Y	5±0.5	16.0~24uH	7 Max
Lk	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PINS,9,11,12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5.MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVEING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承認書

APPROVAL SHEET

客戶料號: TF-2019-R0

CUSTOMER PARTS NO.

品名: TRANSFORMER

PARTS NAME

規格: LP-3320 H (14P) 1.16~1.32 mH

SPECIFICATION

昱京料號: LP-33A38

YU JING PARTS NO.



版本: 第1.1版

REVISION NO.

<h3>承認欄</h3>		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

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YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
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		陳丹丹	2010.05.21

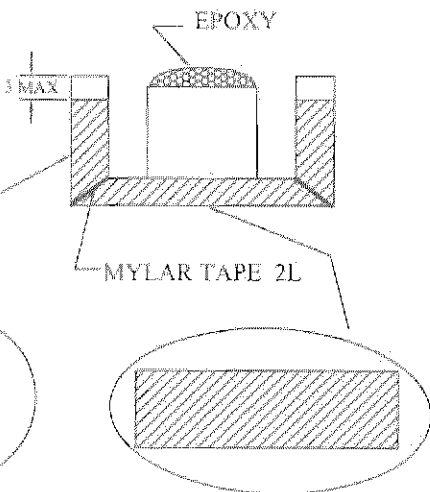
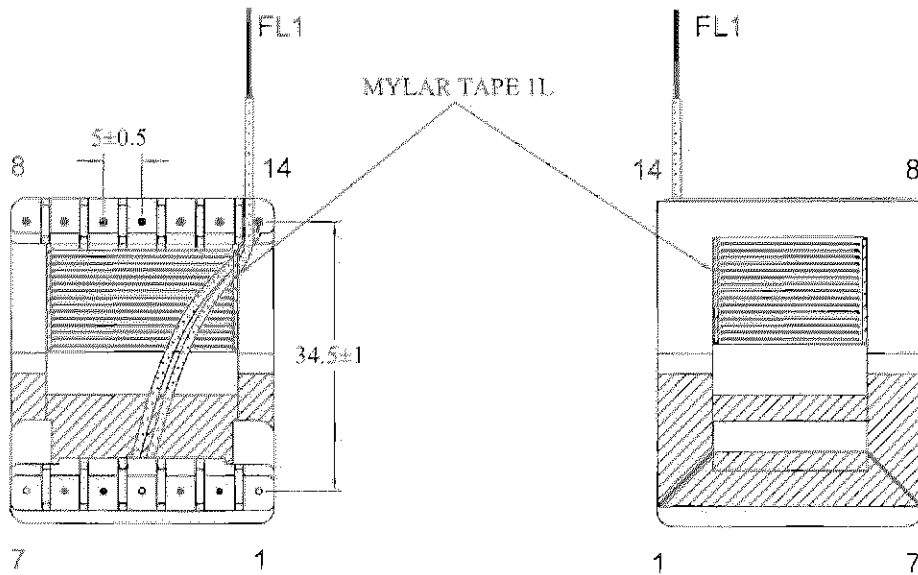
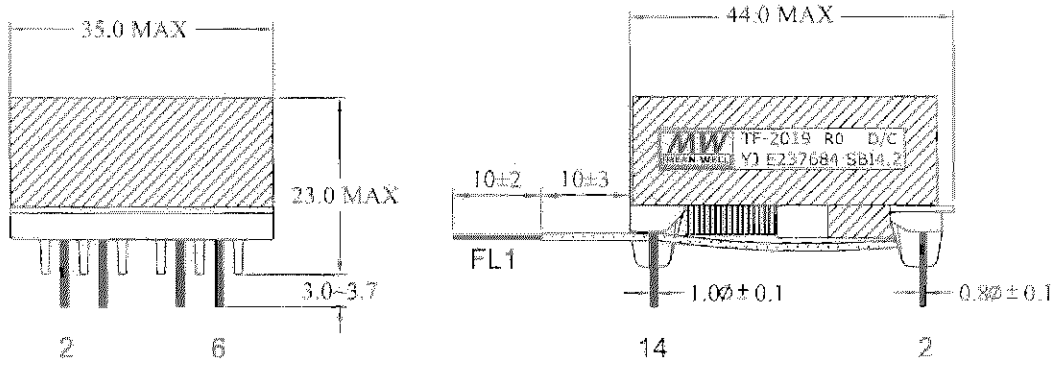




SPECIFICATION

CUSTOMER	明 緯	PART NO.	TF-2019-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A38	DATE	2010-05-21	REV.	1.1	SHEET 2 OF 4

I.MACHENIC DIMENSION (UNIT:mm)



- NOTE:
- 1.PIN1,4,7 CUT OFF.
 - 2.初級CORE需用25mm MYLAR TAPE 包面2L.
 - 3.初級BOBBIN加裝護套後再組裝鐵芯.
 - 4.CORE中柱黏膠且初級與次級組裝要緊密.
 - 5.GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
 - 6.錫點勿超出BOBBIN支點.
 - 7.FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

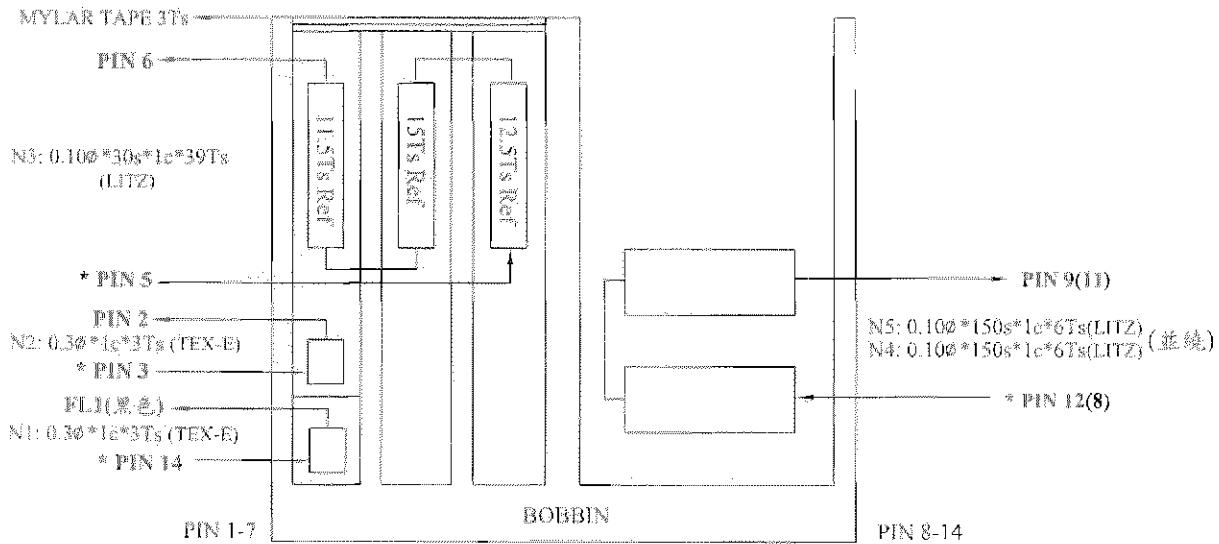
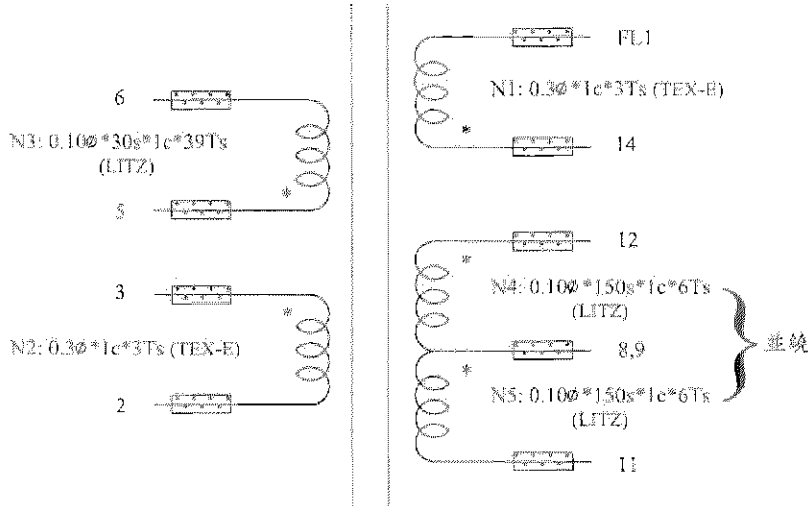
SOLDER
 MYLAR TAPE



SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2019-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A38	DATE	2010-05-21	REV.	1.1	SHEET	3 OF 4

2. WINDING ORDER



NOTE:

- 一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製。
- 出入線加TEFLON TUBE。
- N1,N2用三層絕緣線繞制。
- N1繞於初級BOBBIN靠PIN端槽且于PIN4處出入線(FL1加黑色TEFLON TUBE)。
- N4,N5為雙線並繞密繞,N4由PIN12進PIN9出,N5由PIN8進PIN11出。
- 一次側銅線包色MYLAR TAPE 3Ts后再組裝,然后將繞于一次側N1的入線接至PIN14, FL1接至PIN14旁。





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2019-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A38	DATE	2010-05-21	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	39±0.5	1.16~1.32 mH	2.00 Max
N4	12	9	0.100*150s*1c(LITZ)	Y	6±0.5	22.5~37.5uH	8 Max
N5	8	11	0.100*150s*1c(LITZ)	Y	6±0.5	21.5~36.25uH	8 Max
Lk	5	6	0.100*30s*1c(LITZ)	Y	39±0.5	145~154 uH	@PINS 9, 11, 12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5. MATERIAL LIST Class B Insulation System:SB14.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號: TF-2021-R0

CUSTOMER PARTS NO.

品 名: TRANSFORMER

PARTS NAME

規 格: LP-3320 H (14P) 1.16~1.32 mH

SPECIFICATION

昱京料號: LP-33A36

YU JING PARTS NO.



版 本: 第1.1版

REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

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FAX:+86-0769-87903917

單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		譚艷妮	2010.05.29

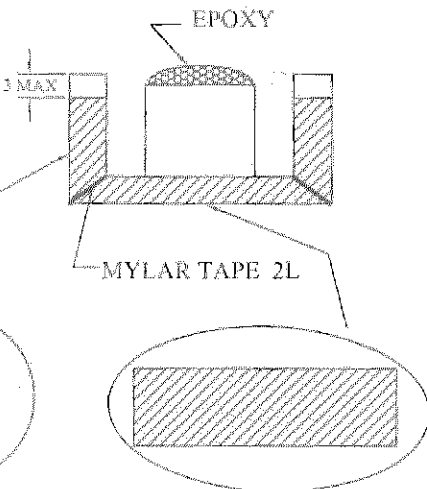
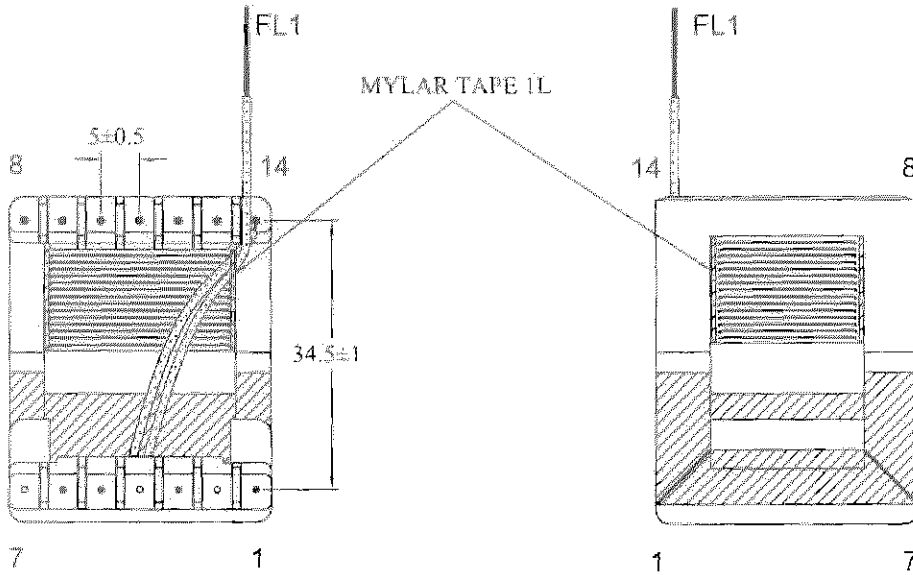
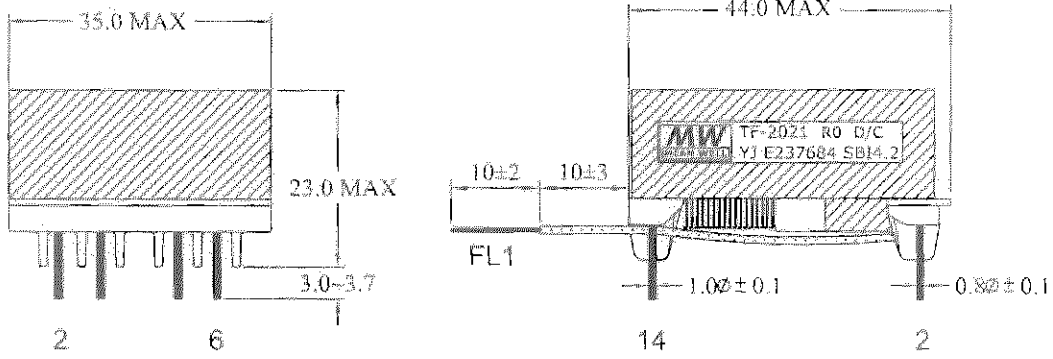




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2021-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A36	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN1,4,7 CUT OFF.
2. 初級 CORE 需用 25mm MYLAR TAPE 包面 2L.
3. 初級 BOBBIN 加裝 護套後再組裝鐵芯.
4. CORE 中柱點膠且初級與次級組裝要緊密.
5. GAP CORE 組裝於次級側, CORE 外包 MYLAR TAPE 3Ts.
6. 錫點勿超出 BOBBIN 支點.
7. FL1 (黑色 TEFLON TUBE) 出線於 PIN14 旁, 長度如外觀圖所示.

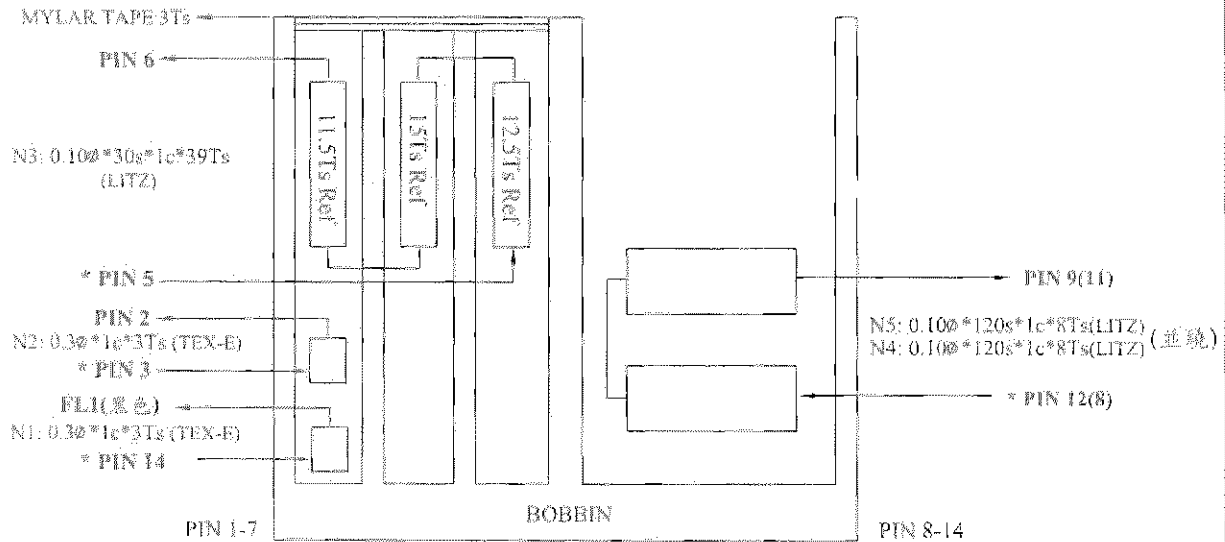
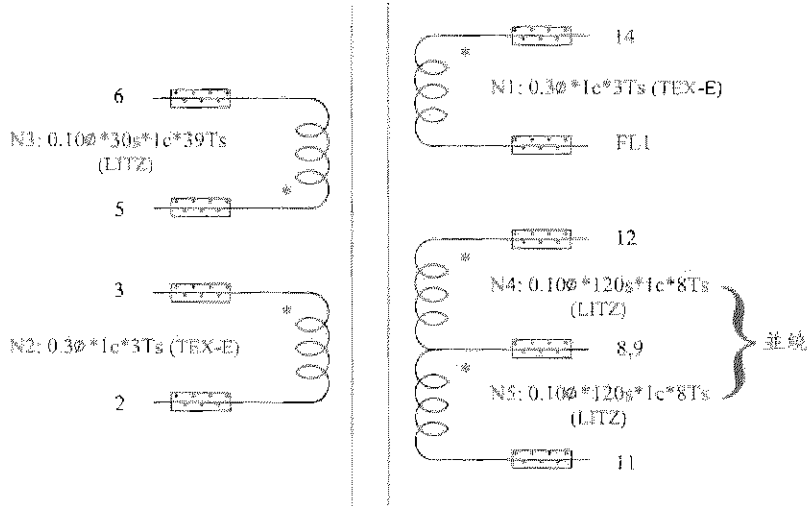
SOLDER
 MYLAR TAPE



SPECIFICATION

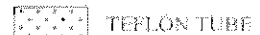
CUSTOMER	明緯	PART NO.	TF-2021-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A36	DATE	2010-05-29	REV.	1.1	SHEET	3 OF 4

2. WINDING ORDER



NOTE:

1. 一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
2. 出入線加TEFLON TUBE.
3. N1,N2用三層絕緣線繞製.
4. N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入線(FL1加黑色TEFLON TUBE).
5. N4,N5為雙線並繞製成,N4由PIN12進PIN9出,N5由PIN8進PIN11出.
6. 一次側線包包MYLAR TAPE 2Ts后再組裝,然後將繞于一次側N1的出線接至PIN14, FL1拉至PIN14穿.





SPECIFICATION

品名	明 細	PART NO.	TF-2021-R0	DESCRIPTION	LP-3320H (14P)		
規格書 No.	LP-33A36	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

IP: 4200A ZENTECH : 3200E, 502A, F = 50KHz V = 0.25V AT 25°C

NO.	SECURITY	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	4#	PL3	0.20*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	39±0.5	1.16~1.32 mH	2 (D) Max
N4	12	0	0.100*120s*1c(LITZ)	Y	8±0.5	42.4~63.6 uH	13 Max
N15	8	11	0.100*120s*1c(LITZ)	Y	8±0.5	41.6~62.4 uH	13 Max
ELK	5	6	0.100*30s*1c(LITZ)	Y	39±0.5	145~154 uH	@PIN8,9,11,12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/1mA, PRIMARY TO SECONDARY
4.0KV/1SEC/AC/1mA, PRIMARY TO CORE

INSULATION RESISTANCE: 10MΩ @ 50°C DC 500V.

5. MATERIAL LIST Class B Insulation System: SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TEX-LITZ-4-2 TM-4#	TEONGMAO ENTERPRISE CO., LTD.	E220377
5	TRIPLE INSULATION WIRE	TEX-E TIW-2X	FURUKAWA ELECTRIC CO., LTD. TOTOKU ELECTRIC CO., LTD.	E206440 E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SHEAVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WF-2552F-2G	HITACHI CHEMICAL CO., LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承認書

APPROVAL SHEET

客戶料號: TF-2022-R0

CUSTOMER PARTS NO.

品名: TRANSFORMER

PARTS NAME

規格: LP-3320 H (14P) 1.34~1.5 mH

SPECIFICATION

昱京料號: LP-33A35

YU JING PARTS NO.



版本: 第1.1版

REVISION NO.

<h3>承認欄</h3>		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

昱京科技股份有限公司
YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
NO.192,LUNG EN ST.,SANXAI
TOWN,TAIPEI HSIEN,R.O.C
TEL:02-2672-3910, 2674-1740
FAX:02-2672-4872, 8671-7792

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東莞塘廈昱京電子廠
DONG GUAN,TANGXIA,YU JING ELECTRONIC
MANUFACTORY
東莞市塘廈鎮高麗工業區高麗三路3之1號
NO.3-1,GAO LI ROAD,GAO LI INDUSTRY,
TANGXIA TOWN,DONG GUAN CITY,CHINA
TEL:+86-0769-87902089~91
FAX:+86-0769-87903917

單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		譚豔妮	2010.05.29

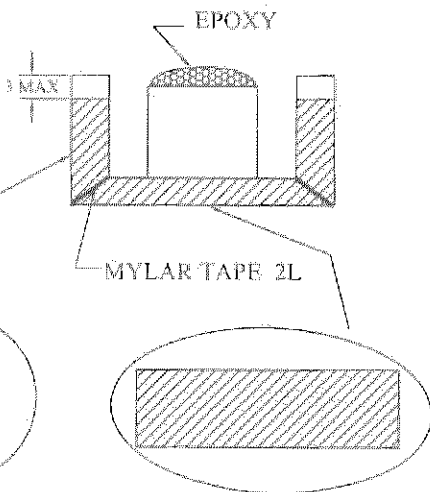
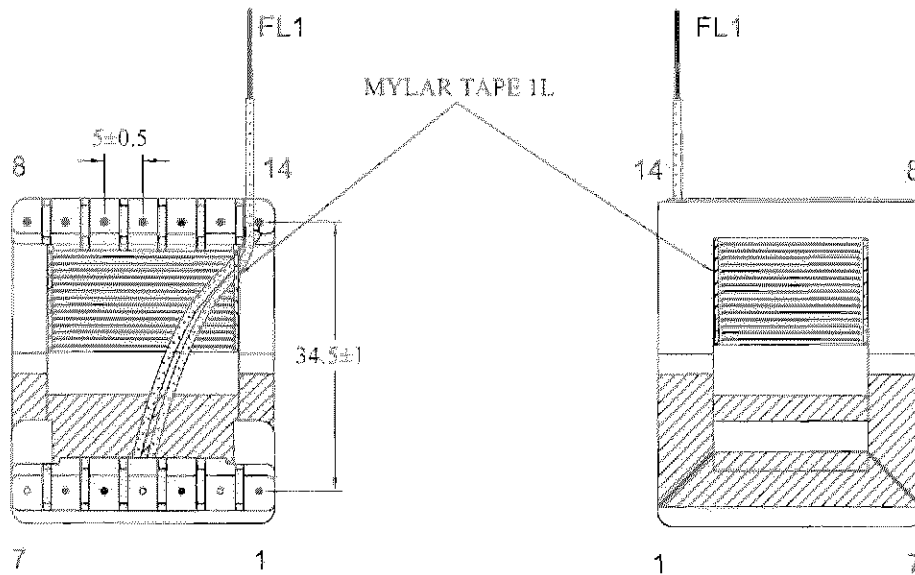
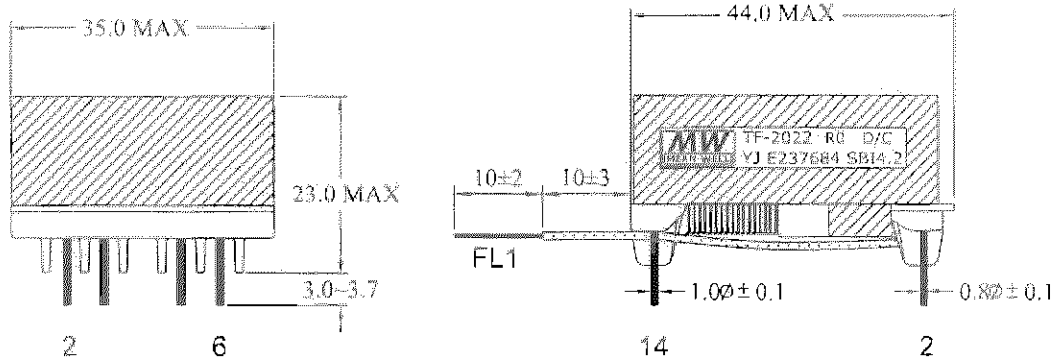




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2022-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A35	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN1,4,7 CUT OFF.
2. 初級CORE需用25mm MYLAR TAPE包面2L.
3. 初級BOBBIN加裝護套後再組裝鐵芯.
4. CORE中性點聯且初級與次級組裝要緊密.
5. GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
6. 錫點勿超出BOBBIN支點.
7. FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

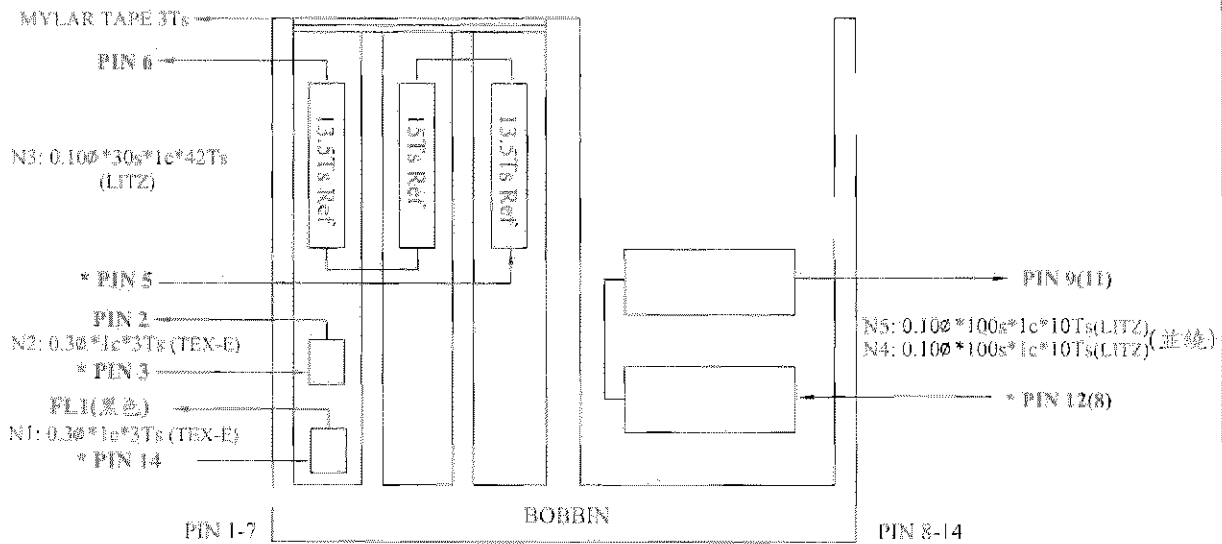
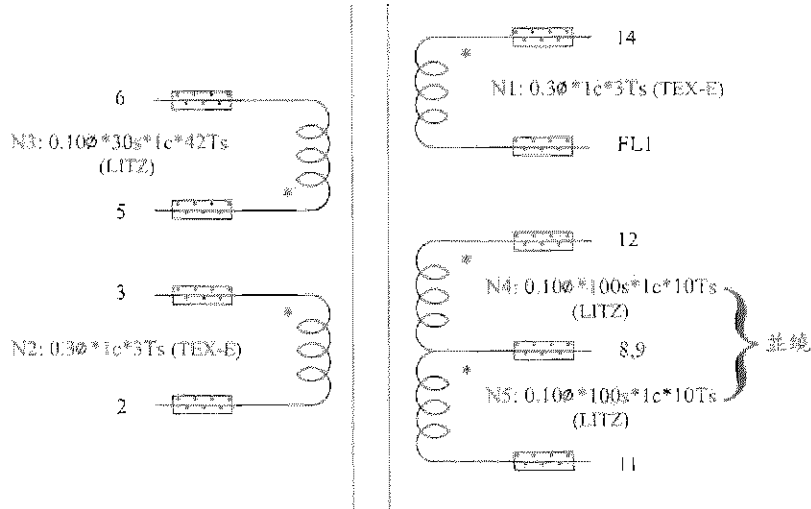
SOLDER
 MYLAR TAPE



SPECIFICATION

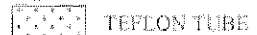
CUSTOMER	明緯	PART NO.	TF-2022-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A35	DATE	2010-05-29	REV.	1.1	SHEET 3 OF 4

2.WINDING ORDER



NOTE:

1. 一次側BOBBIN PIN 朝向機台內繞製, 二次側BOBBIN PIN 朝向機台外繞製.
2. 出入線加TEFLON TUBE.
3. N1, N2 用三層絕緣線繞制.
4. N1 繞於初級BOBBIN 靠PIN 端槽且于PIN 14 處出入線 (FL1 加黑色TEFLON TUBE).
5. N4, N5 為雙組並繞器繞, N4 由PIN 12 進PIN 9 出, N5 由PIN 8 進PIN 11 出.
5. 一次側線包色MYLAR TAPE 2Ts 后再組裝, 然后將繞于一次側N1 的出線接至PIN 14, FL1 接至PIN 14 旁.





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2022-R0	DESCRIPTION	LP-3320H(14P)		
MODEL NO.	LP-33A35	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V =0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.100*100s*1c(LITZ)	Y	10±0.5	64.8~97.2uH	18 Max
N5	8	11	0.100*100s*1c(LITZ)	Y	10±0.5	66.4~99.6uH	18 Max
Lk	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PIN8,9,11,12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/1 mA , PRIMARY TO SECONDARY
4.0KV/1 SEC/AC/1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5.MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERRÓXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號: TF-2023-R0
CUSTOMER PARTS NO.

品 名: TRANSFORMER
PARTS NAME

規 格: LP-3320 H (14P) 1.34~1.5 mH
SPECIFICATION

昱京料號: LP-33A34
YU JING PARTS NO.

版 本: 第1.1版
REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

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YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
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TOWN,TAIPEI HSIEN,R.O.C
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單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
[Stamp]	[Stamp]	譚豔妮	2010.05.29

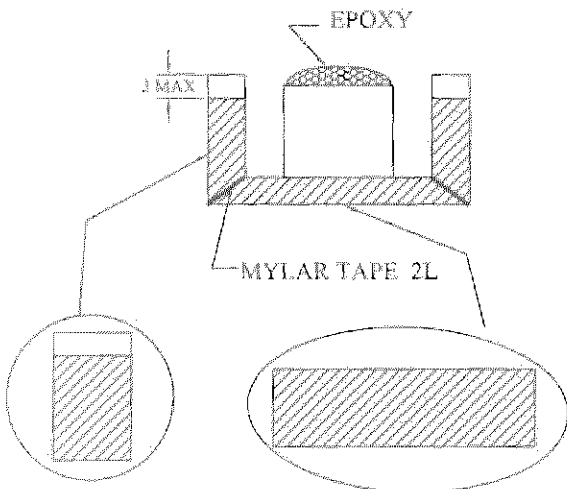
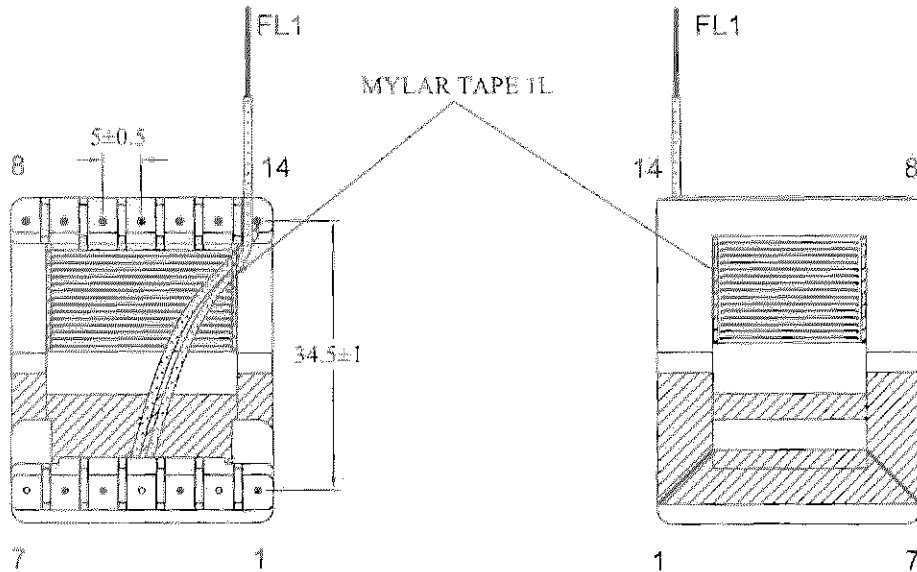
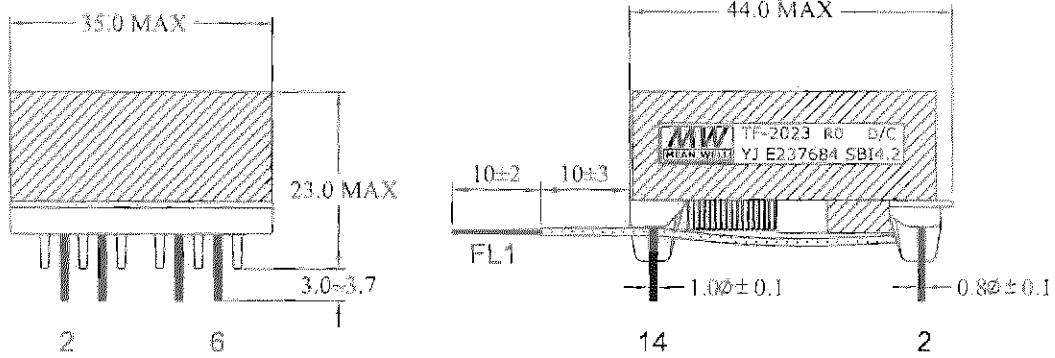




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2023-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A34	DATE	2010-05-29	REV.	1.1	SHEET	2 OF 4

I.MACHENIC DIMENSION (UNIT:mm)



- NOTE:
- PIN1,4,7 CUT OFF.
 - 初級CORE需用25mm MYLAR TAPE包面2L.
 - 初級BOBBIN加裝護套後再組裝鐵芯.
 - CORE中柱點膠且初級與次級組裝要緊密.
 - GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
 - 錫點勿超出BOBBIN支點.
 - FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

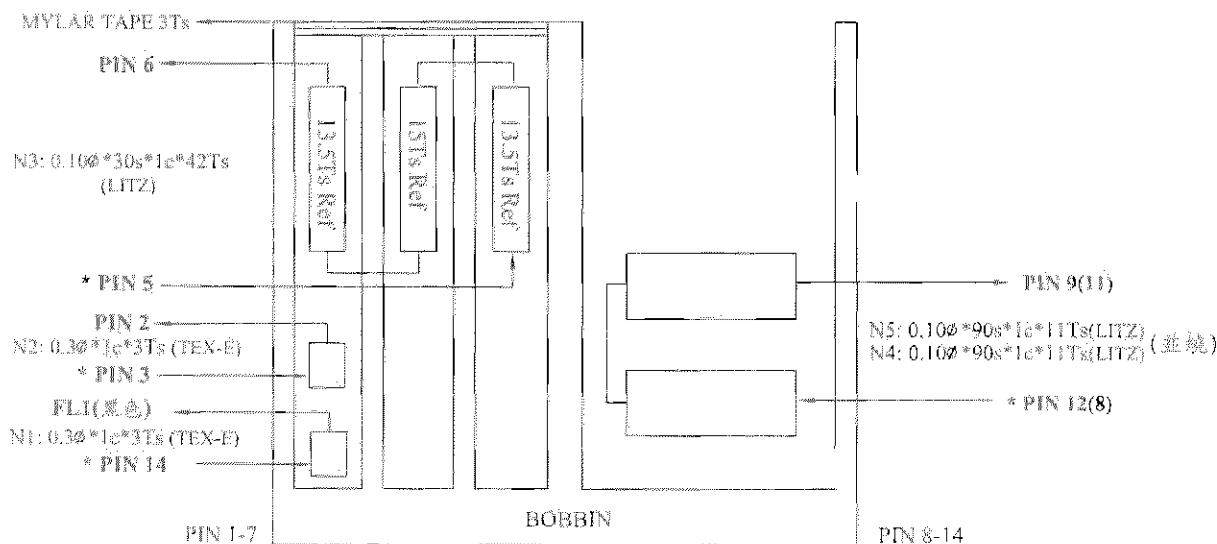
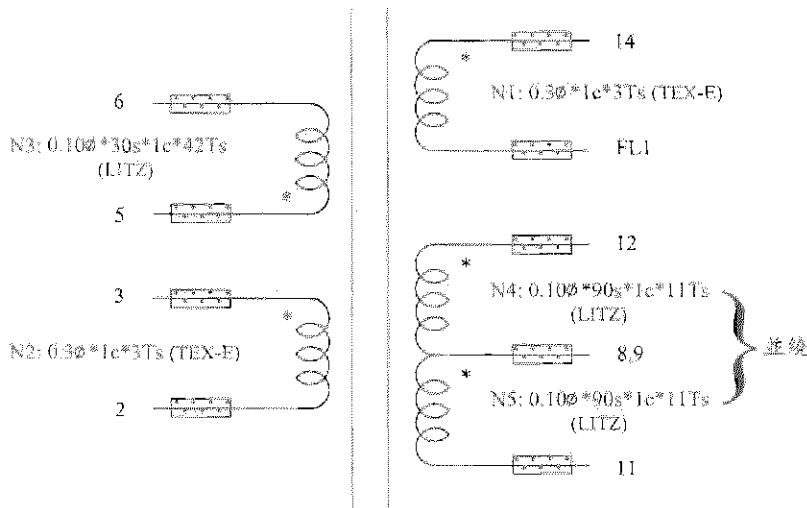
SOLDER
 MYLAR TAPE



SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2023-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A34	DATE	2010-05-29	REV.	1.1	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

- 1.一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
- 2.出入線加TEFLON TUBE
- 3.N1,N2用三層絕緣漆繞製.
- 4.N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入線(FL1加黑色TEFLON TUBE).
- 5.N4,N5為雙細並繞密繞.N4由PIN12進PIN9出,N5由PIN8進PIN11出.
- 6.一次側線包MYLAR TAPE 2Ts后再組裝,然後將繞于一次側N1的出線接至PIN14, FL1拉至PIN14旁.





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2023-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A34	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION:

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V =0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.3φ*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	75 Max
N2	3	2	0.3φ*1c(TEX-E)	Y	3±0.5	6.4~9.6uH	55 Max
N3	5	6	0.10φ*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.10φ*90s*1c(LITZ)	Y	11±0.5	80~118uH	21 Max
N5	8	11	0.10φ*90s*1c(LITZ)	Y	11±0.5	79~117uH	21 Max
Lk	5	6	0.10φ*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PIN# 9,11,12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5.MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVEING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號: TF-2062-R0

CUSTOMER PARTS NO.

品 名: TRANSFORMER

PARTS NAME

規 格: LP-3320 H (14P) 2.25~2.46 mH

SPECIFICATION

昱京料號: LP-33A33

YU JING PARTS NO.



版 本: 第1.1版

REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

昱京科技股份有限公司
YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
NO.192,LUNG EN ST.,SANXAI
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單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		譚豔妮	2010.05.29





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2062-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A33	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V =0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.3φ*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	75 Max
N2	3	2	0.3φ*1c(TEX-E)	Y	3±0.5	7.2~10.8 uH	55 Max
N3	5	6	0.10φ*25s*1c(LITZ)	Y	52±0.5	2.25~2.46 mH	35 Max
N4	12	9	0.10φ*300s*1c(LITZ)	Y	3±0.5	5.6~9.6 uH	3 Max
N5	8	11	0.10φ*300s*1c(LITZ)	Y	3±0.5	5.6~9.6 uH	3 Max
Lk	5	6	0.10φ*25s*1c(LITZ)	Y	52±0.5	253~268 uH	@PINS 9,11,12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5. MATERIAL LIST Class B Insulation System:SBI4.2

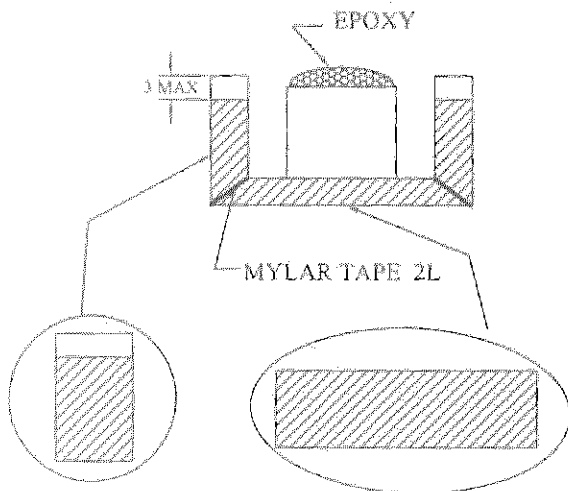
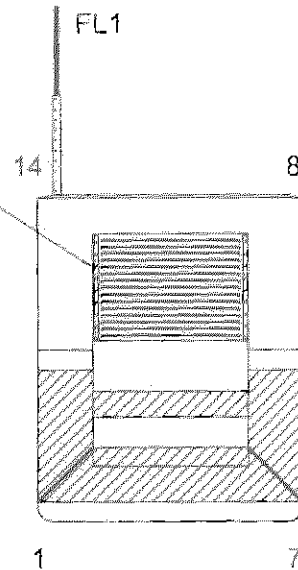
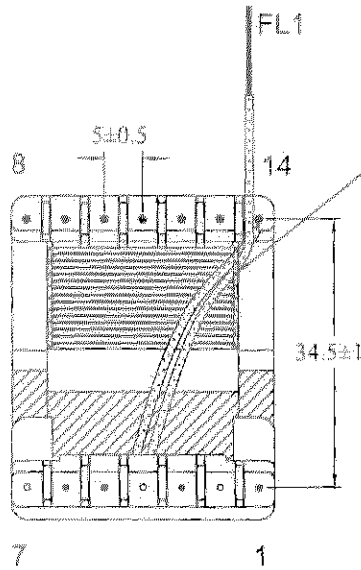
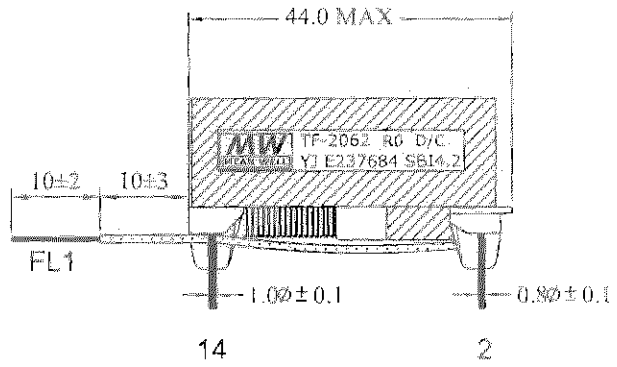
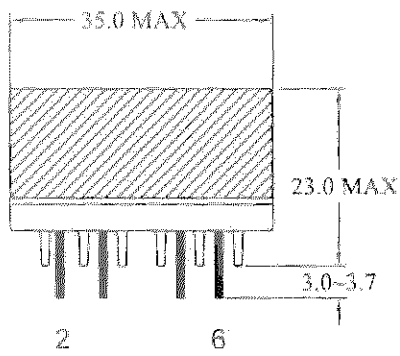
NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979



SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2062-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A33	DATE	2010-05-29	REV.	1.1	SHEET	2 OF 4

1. MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN1,4,7 CUT OFF.
2. 初級CORE需用25mm MYLAR TAPE包面2L.
3. 初級BOBBIN加裝護套後再組裝鐵芯.
4. CORE中柱點膠且初級與次級組裝要緊密.
5. GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
6. 錫點勿超出BOBBIN支點.
7. FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

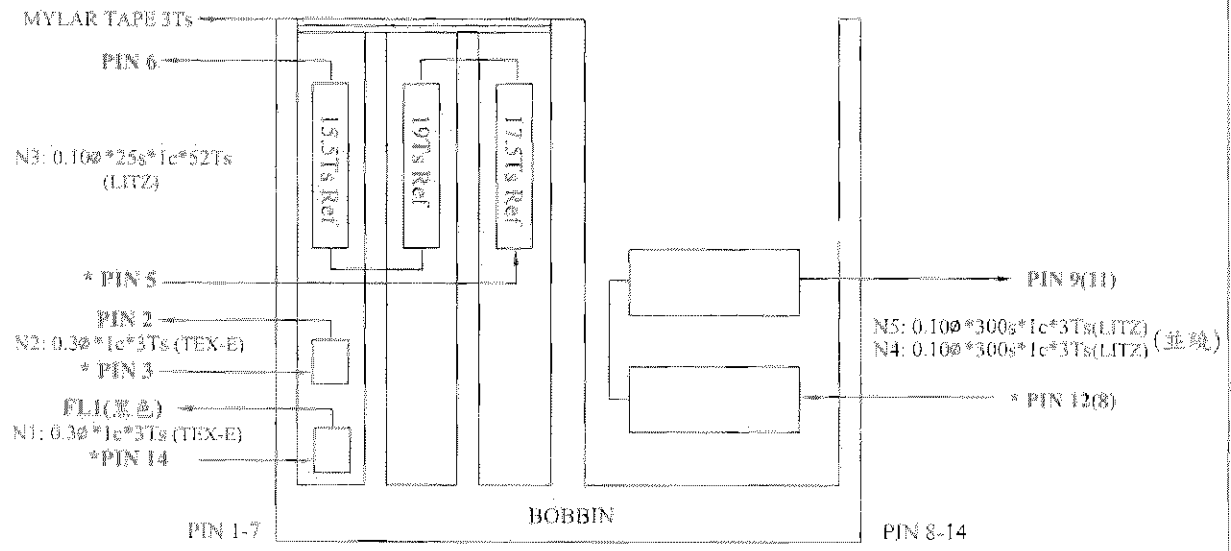
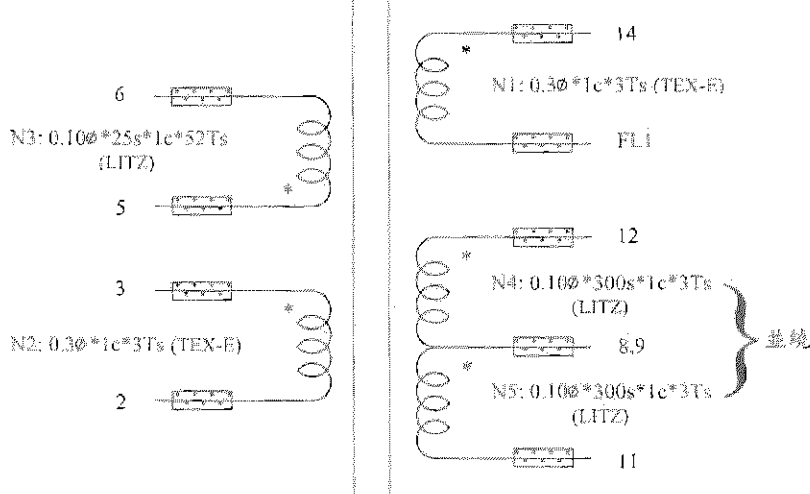
SOLDER
 MYLAR TAPE



SPECIFICATION

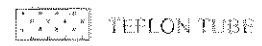
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MODEL NO.	LP-33A33	DATE	2010-05-29	REV.	1.1	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

- 一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
- 出入線加TEFLON TUBE.
- N1,N2用三層絕緣線繞製.
- N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入線(FLI加黑色TEFLON TUBE).
- N4,N5為雙組並繞密繞,N4由PIN12進PIN9出,N5由PIN8進PIN11出.
- 一次銅線包包MYLAR TAPE 2Ts后再組裝,然後將繞于一次側N1的出線接至PIN14, FLI拉至PIN14旁.



客戶名稱: 明緯企業股份有限公司

承認書

APPROVAL SHEET

客戶料號: TF-2063-R0

CUSTOMER PARTS NO.

品名: TRANSFORMER

PARTS NAME

規格: LP-3320 H (14P) 1.34~1.5 mH

SPECIFICATION

昱京料號: LP-33A32

YU JING PARTS NO.



版本: 第1.1版

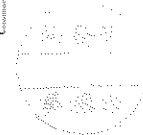
REVISION NO.

<h3>承認欄</h3>		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

昱京科技股份有限公司
YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
NO.192,LUNG EN ST.,SANXAI
TOWN,TAIPEI HSIEN,R.O.C
TEL:02-2672-3910, 2674-1740
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YU JING INTERNATIONAL CO.,LTD.
東莞塘廈昱京電子廠
DONG GUAN,TANGXIA,YU JING ELECTRONIC
MANUFACTORY
東莞市塘廈鎮高麗工業區高麗三路3之1號
NO.3-1,GAO LI ROAD,GAO LI INDUSTRY,
TANGXIA TOWN,DONG GUAN CITY,CHINA
TEL:+86-0769-87902089~91
FAX:+86-0769-87903917

單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		譚豔妮	2010.05.29

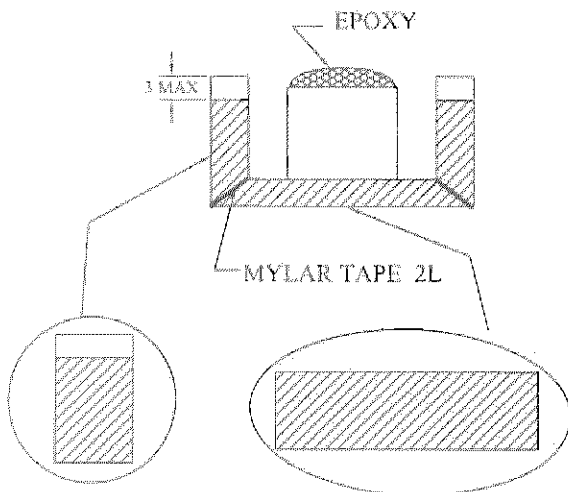
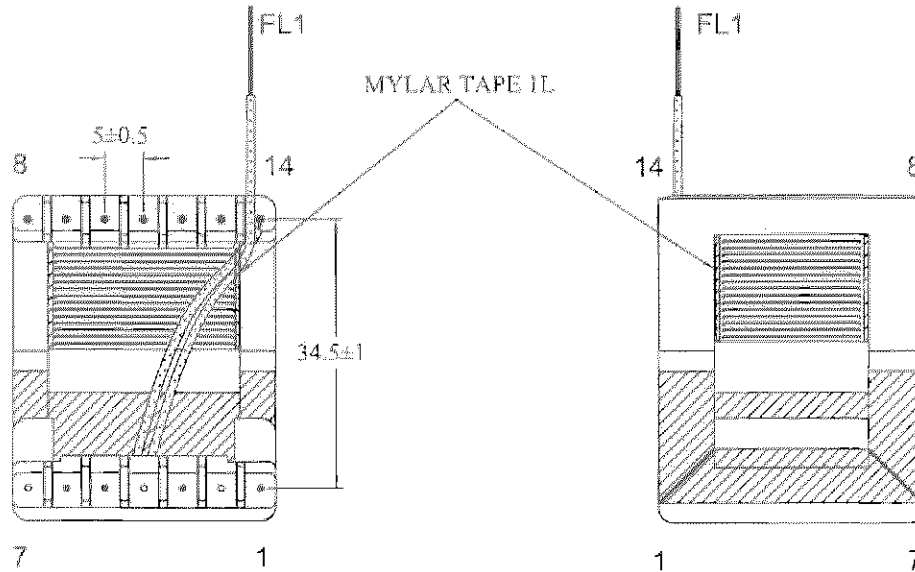
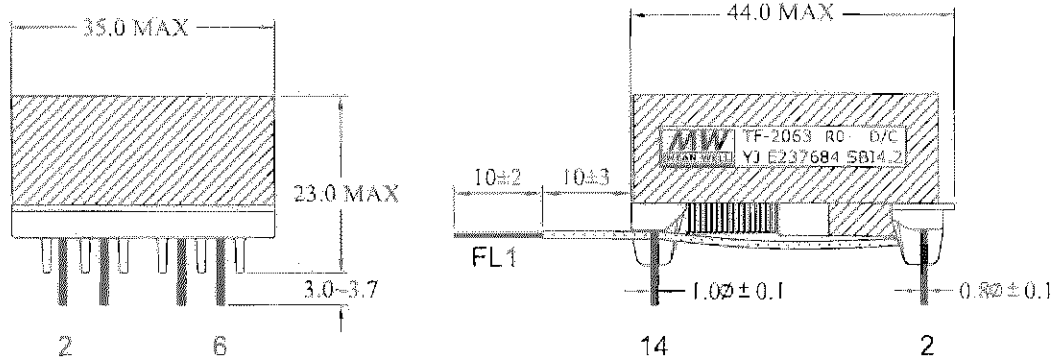




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2063-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A32	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

1. MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN1,4,7 CUT OFF.
2. 初級CORE需用25mm MYLAR TAPE包面2L.
3. 初級BOBBIN加裝護套後再組裝鐵芯.
4. CORE中柱黏膠且初級與次級組裝要緊密.
5. GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
6. 錫點勿超出BOBBIN支點.
7. FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

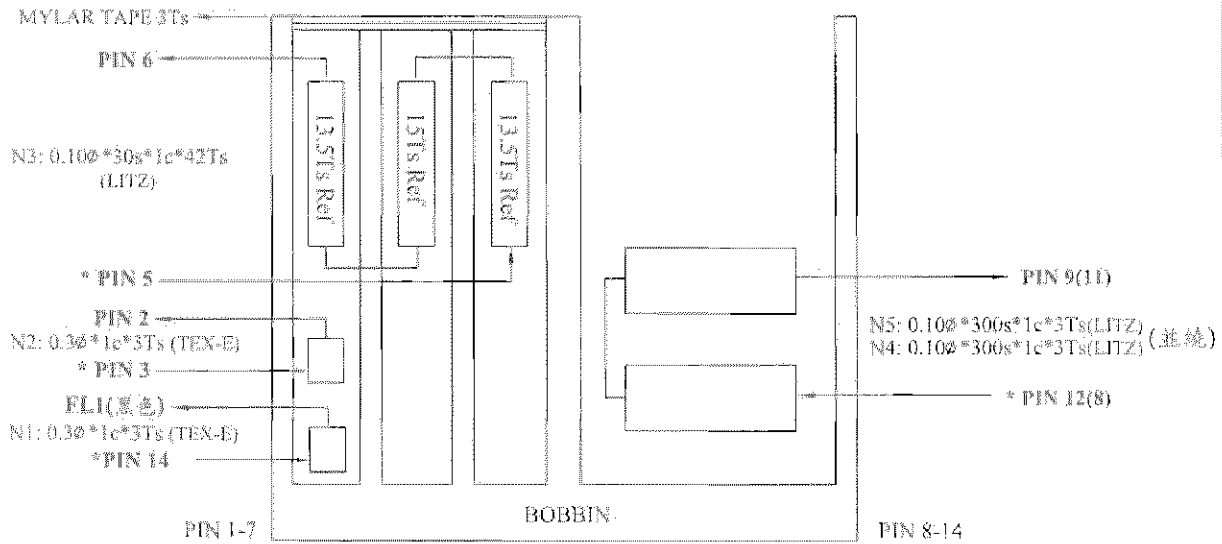
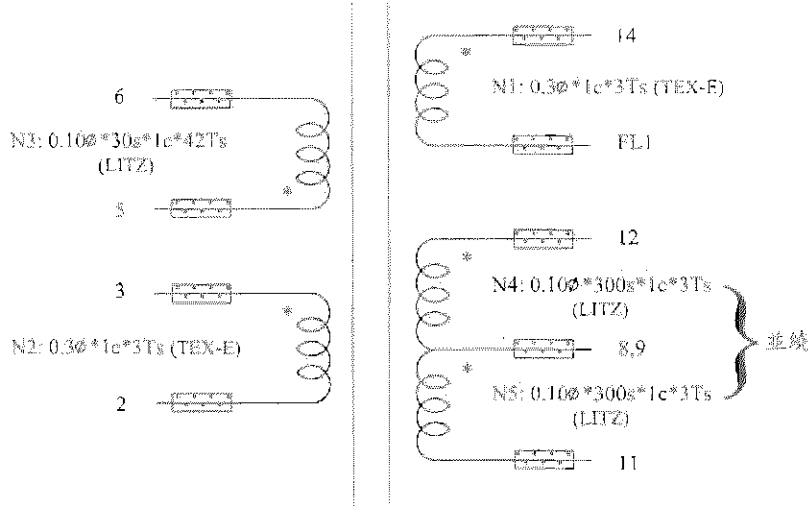
SOLDER
 MYLAR TAPE



SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2063-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A32	DATE	2010-05-29	REV.	L1	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

- 1.一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
- 2.出入線加TEFLON TUBE.
- 3.N1,N2用三層絕緣線繞製.
- 4.N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入線(FL1加黑色TEFLON TUBE).
- 5.N4,N5為雙細並繞密繞,N4由PIN12進PIN9出,N5由PIN8進PIN11出.
- 5.一次側線包色MYLAR TAPE 2Ts后再細製,然后將繞于一次側NI的出線插至PIN14, FL1插至PIN14旁.





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2063-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A32	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.3Ø*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	75 Max
N2	3	2	0.3Ø*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	55 Max
N3	5	6	0.10Ø*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.10Ø*300s*1c(LITZ)	Y	3±0.5	5.6~9.6uH	3 Max
N5	8	11	0.10Ø*300s*1c(LITZ)	Y	3±0.5	5.6~9.6uH	3 Max
Lk	5	6	0.10Ø*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PIN8,9,11,12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5. MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承認書

APPROVAL SHEET

客戶料號: TF-2064-R0

CUSTOMER PARTS NO.

品名: TRANSFORMER

PARTS NAME

規格: LP-3320 H (14P) 1.34~1.5 mH

SPECIFICATION

昱京料號: LP-33A31

YU JING PARTS NO.



版本: 第1.1版

REVISION NO.

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單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		譚豔妮	2010.05.29

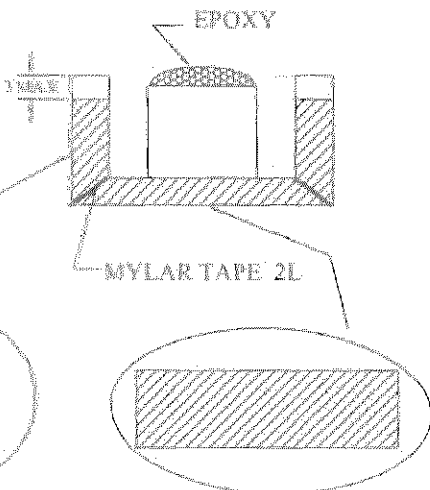
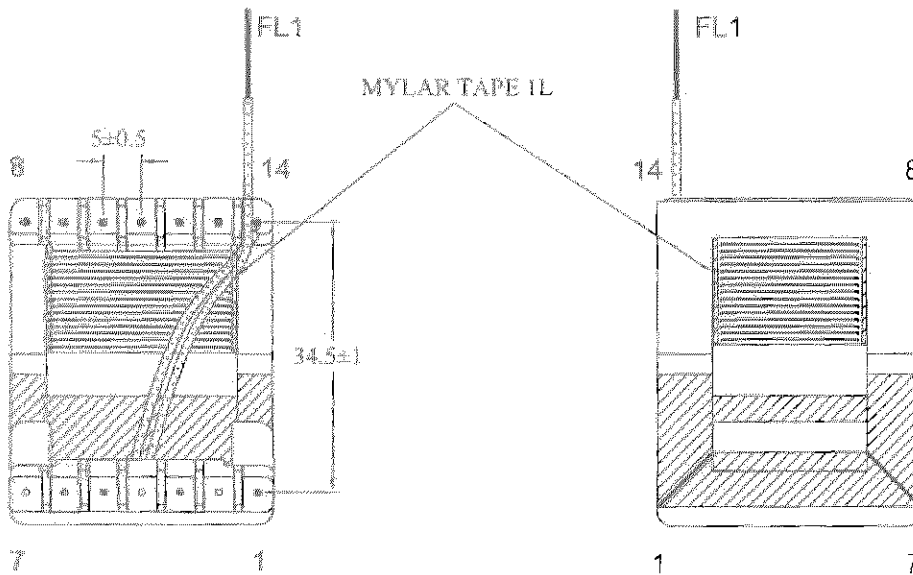
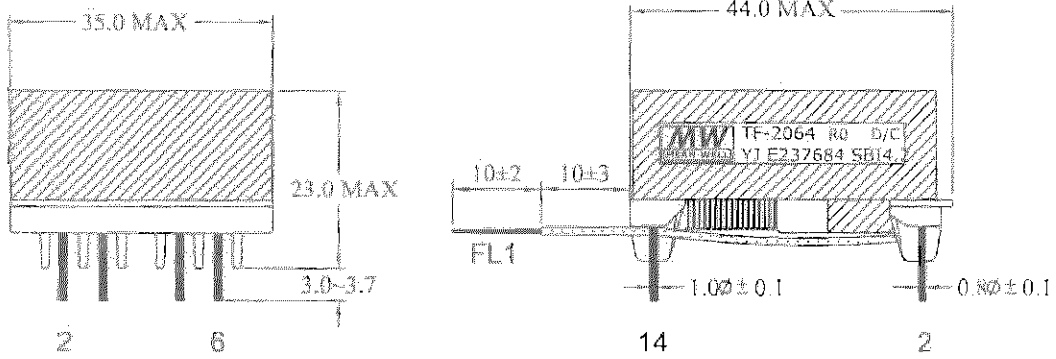




SPECIFICATION

CUSTOMER	明 緯	PART NO.	TF-2064-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A31	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



- NOTE:
1. PIN 1, 4, 7 CUT OFF.
 2. 初級CORE需用25mm MYLAR TAPE包面2L.
 3. 初級BOBBIN加裝護套後再組裝鐵芯.
 4. CORE中柱點膠且初級與次級組裝要緊密.
 5. GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
 6. 錫點勿超出BOBBIN支點.
 7. FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

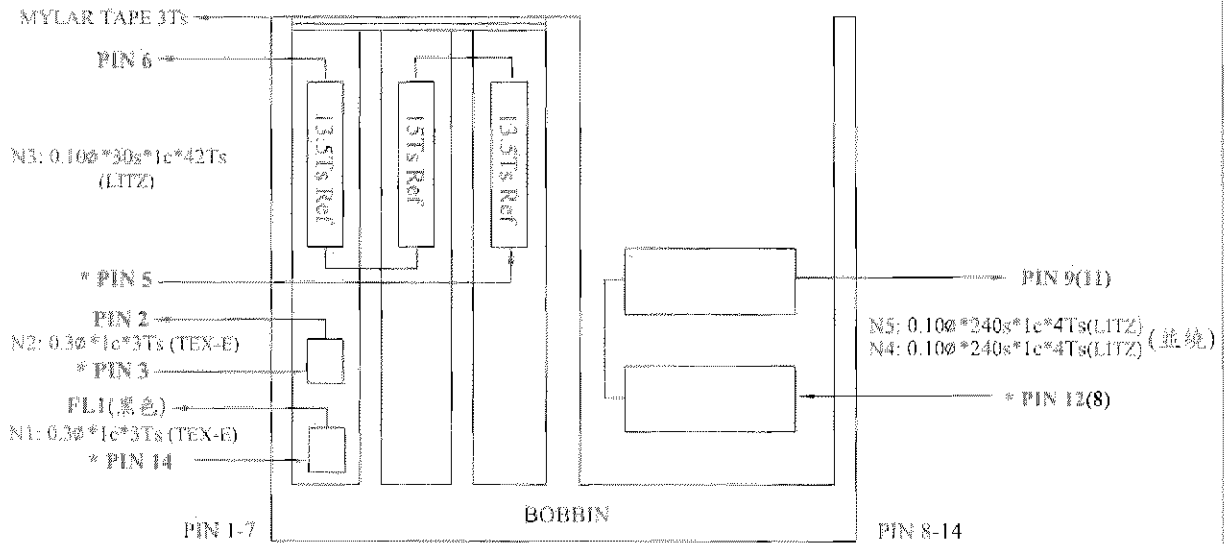
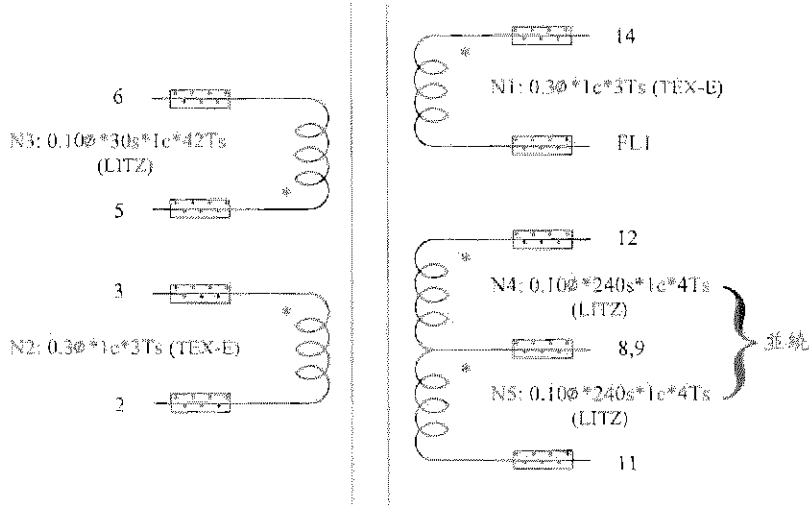
SOLDER
 MYLAR TAPE



SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2064-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A31	DATE	2010-05-29	REV.	1.1	SHEET 3 OF 4

2. WINDING ORDER



NOTE:

1. 一次側BOBBIN PIN朝向機台內繞製, 二次側BOBBIN PIN朝向機台外繞製.
2. 出入線加TEFLON TUBE.
3. N1, N2用三層絕緣線繞制.
4. N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入線(FL1加黑色TEFLON TUBE).
5. N4, N5為雙組並繞密繞, N4由PIN12進PIN9出, N5由PIN8進PIN11出.
5. 一次側線包MYLAR TAPE 2Ts后再組裝, 然后将繞于一次側N1的出線接至PIN14, FL1拉至PIN14旁.

TEFLON TUBE



SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2064-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A31	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.3φ*1c(TEX-E)	Y	3±0.5	6.4-9.6uH	75 Max
N2	3	2	0.3φ*1c(TEX-E)	Y	3±0.5	6.4-9.6uH	55 Max
N3	5	6	0.10φ*30s*1c(LITZ)	Y	42±0.5	1.34-1.5 mH	215 Max
N4	12	9	0.10φ*240s*1c(LITZ)	Y	4±0.5	10-16 uH	5 Max
N5	8	11	0.10φ*240s*1c(LITZ)	Y	4±0.5	10-16 uH	5 Max
Lk	5	6	0.10φ*30s*1c(LITZ)	Y	42±0.5	165-176 uH	@PINS 9,11,12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5.MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVEING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號: TF-2065-R0

CUSTOMER PARTS NO.

品 名: TRANSFORMER

PARTS NAME

規 格: LP-3320 H (14P) 1.46~1.64 mH

SPECIFICATION

昱京料號: LP-33A30

YU JING PARTS NO.



版 本: 第1.1版

REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

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YU JING TECHNOLOGY CO.,LTD.
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單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		譚豔妮	2010.05.29

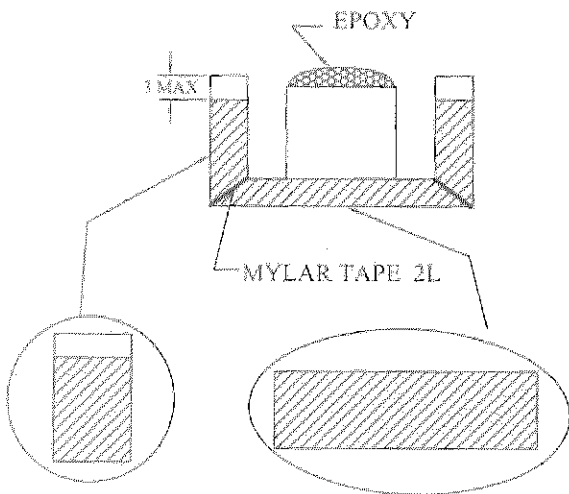
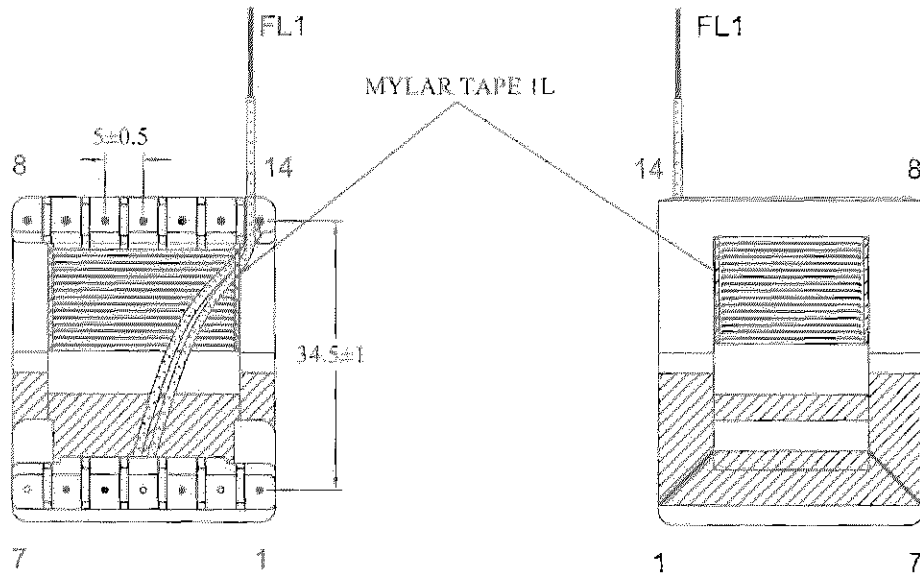
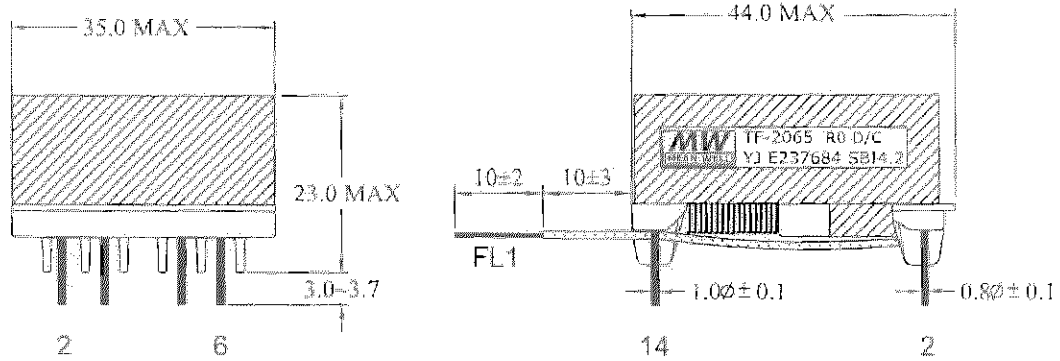




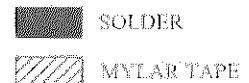
SPECIFICATION

CUSTOMER	明 綠	PART NO.	TF-2065-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A30	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

1. MACHENIC DIMENSION (UNIT:mm)



- NOTE:
- 1.PIN1,4,7 CUT-OFF.
 - 2.初級CORE需用25mm MYLAR TAPE包面2L.
 - 3.初級BOBBIN加裝護套後再組裝鐵芯.
 - 4.CORE中柱點膠且初級與次級組裝要緊密.
 - 5.GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
 - 6.錫點勿超出BOBBIN支點.
 - 7.FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

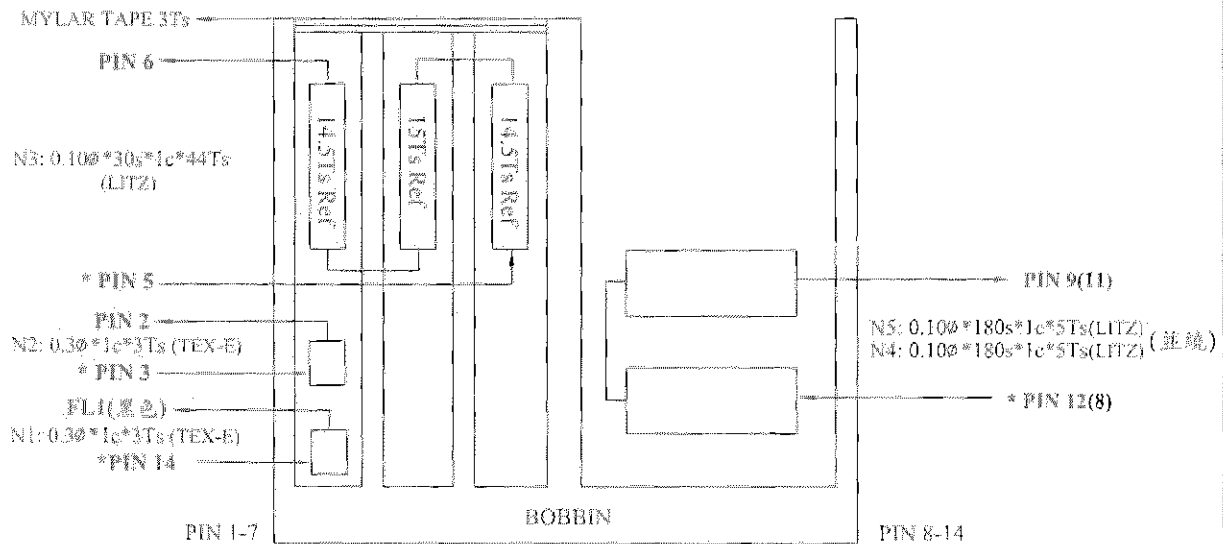
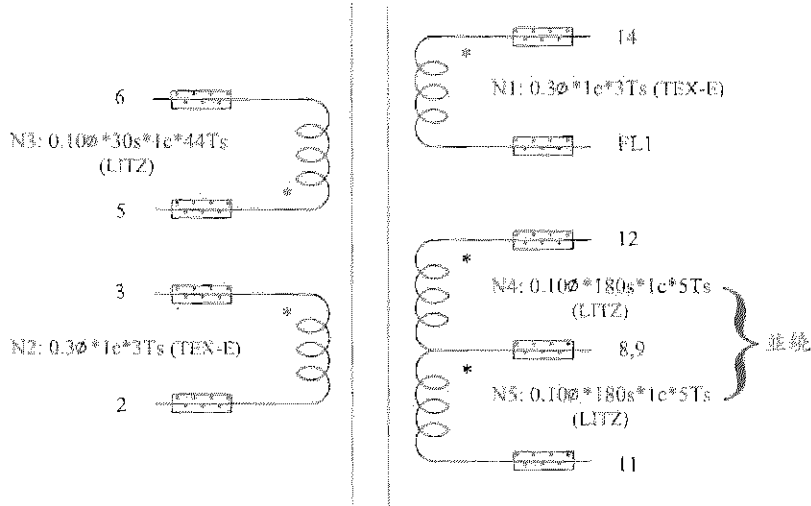




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2065-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A30	DATE	2010-05-29	REV.	1.1	SHEET 3 OF 4

2.WINDING ORDER



NOTE:

- 一次側BOBBIN PIN朝內機台內繞製,二次側BOBBIN PIN朝向外機台繞製.
- 出入線加TEFLON TUBE.
- N1,N2用三層絕緣線繞制.
- N1繞於初級BOBBIN靠PIN端且于PIN14處出入線(FL1加黑色TEFLON TUBE).
- N4,N5為雙並繞密繞.N4由PIN12進PIN9出.N5由PIN8進PIN11出.
- 一次側線包MYLAR TAPE 2Ts后再組裝,然後將繞于一次側N1的出線接至PIN14, FL1插至PIN14旁.





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2065-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A30	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V =0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FLI	0.3φ*1c(TEX-E)	Y	3±0.5	6.4~9.6	75Max
N2	3	2	0.3φ*1c(TEX-E)	Y	3±0.5	6.4~9.6	55 Max
N3	5	6	0.10φ*30s*1c(LITZ)	Y	44±0.5	1.46~1.64 mH	225 Max
N4	12	9	0.10φ*180s*1c(LITZ)	Y	5±0.5	16.8~25.2	7 Max
N5	8	11	0.10φ*180s*1c(LITZ)	Y	5±0.5	16~24	7 Max
Lk	5	6	0.10φ*30s*1c(LITZ)	Y	44±0.5	183~194 uH	@PIN8,9,11,12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5.MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承認書

APPROVAL SHEET

客戶料號: TF-2066-R0

CUSTOMER PARTS NO.

品名: TRANSFORMER

PARTS NAME

規格: LP-3320 H (14P) 1.34~1.5 mH

SPECIFICATION

昱京料號: LP-33A29

YU JING PARTS NO.



版本: 第1.1版

REVISION NO.

<h3>承認欄</h3>		
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TOWN,TAIPEI HSIEN,R.O.C
TEL:02-2672-3910, 2674-1740
FAX:02-2672-4872, 8671-7792

昱京國際貿易有限公司
YU JING INTERNATIONAL CO.,LTD.
東莞塘廈昱京電子廠
DONG GUAN,TANGXIA,YU JING ELECTRONIC
MANUFACTORY
東莞市塘廈鎮高麗工業區高麗三路3之1號
NO.3-1,GAO LI ROAD,GAO LI INDUSTRY,
TANGXIA TOWN,DONG GUAN CITY,CHINA
TEL:+86-0769-87902089-91
FAX:+86-0769-87903917

單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY	日期 DATE
		譚豔妮	2010.05.29

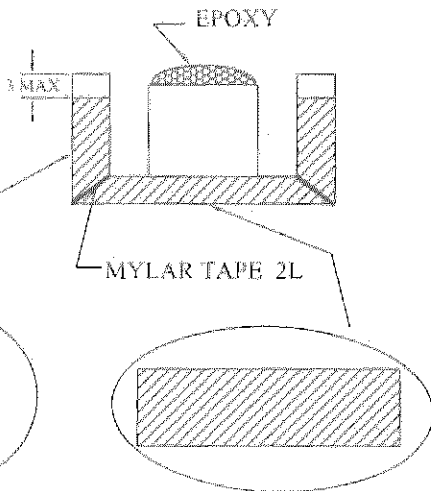
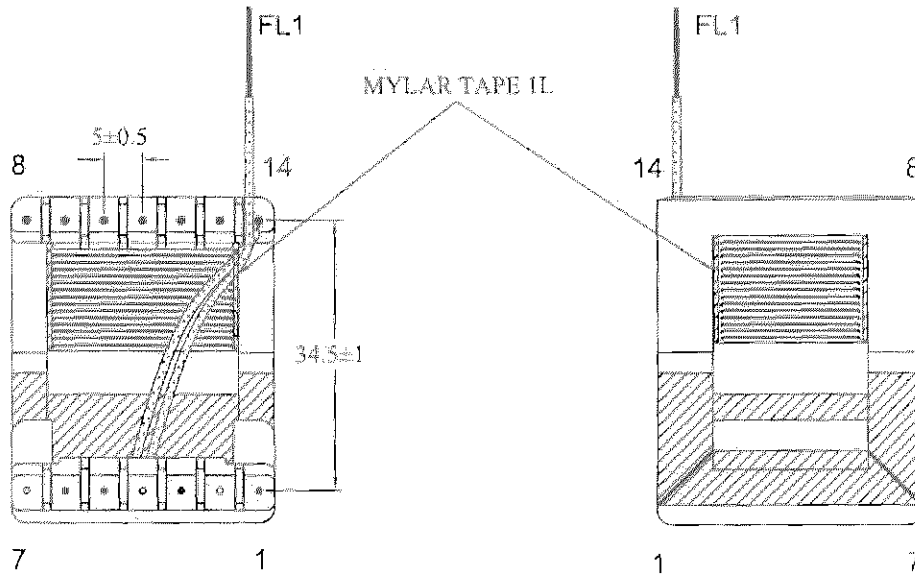
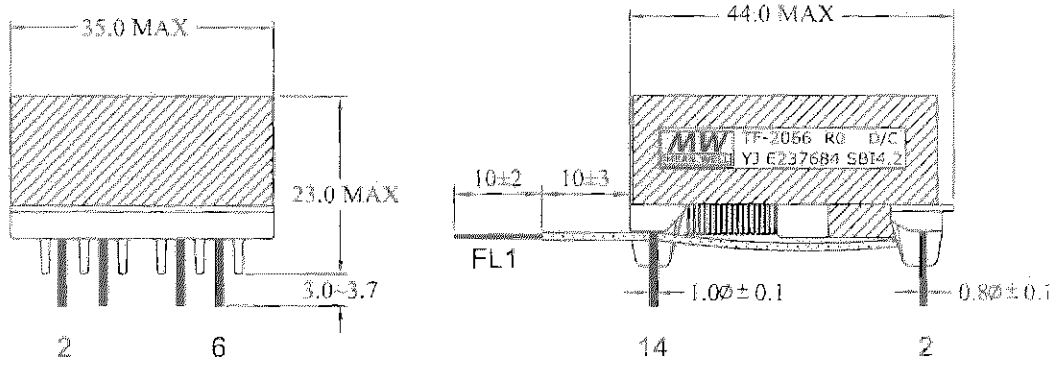




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2066-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A29	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



NOTE:
 1. PIN1,4,7 CUT OFF.
 2. 初級CORE需用25mm MYLAR TAPE包面2L.
 3. 初級BOBBIN加裝護套後再組裝鐵芯.
 4. CORE中柱點膠且初級與次級組裝要緊密.
 5. GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
 6. 錫點勿超出BOBBIN支點.
 7. FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

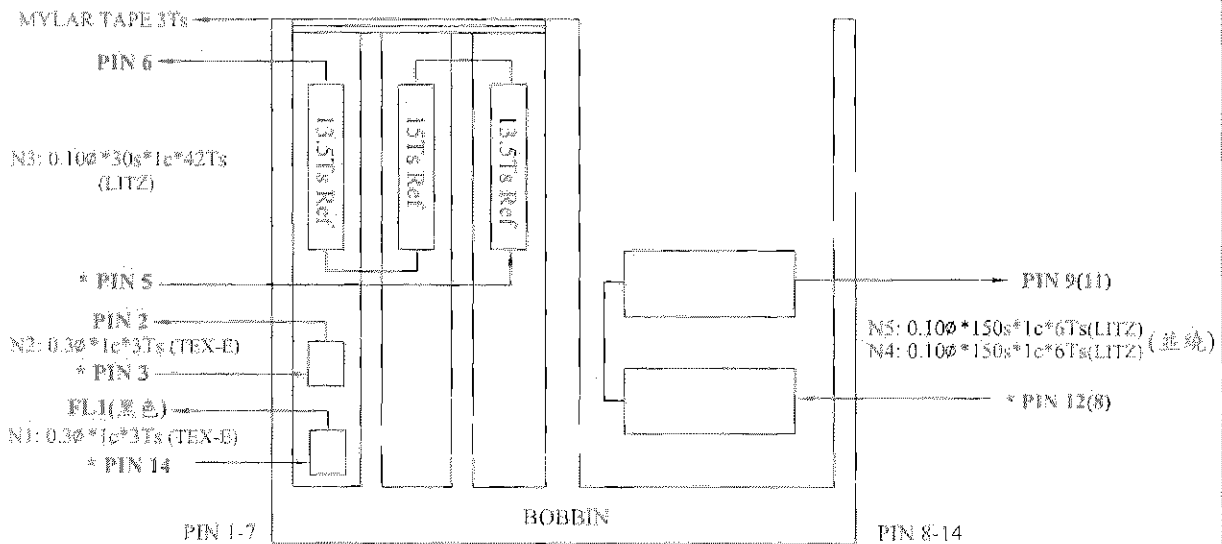
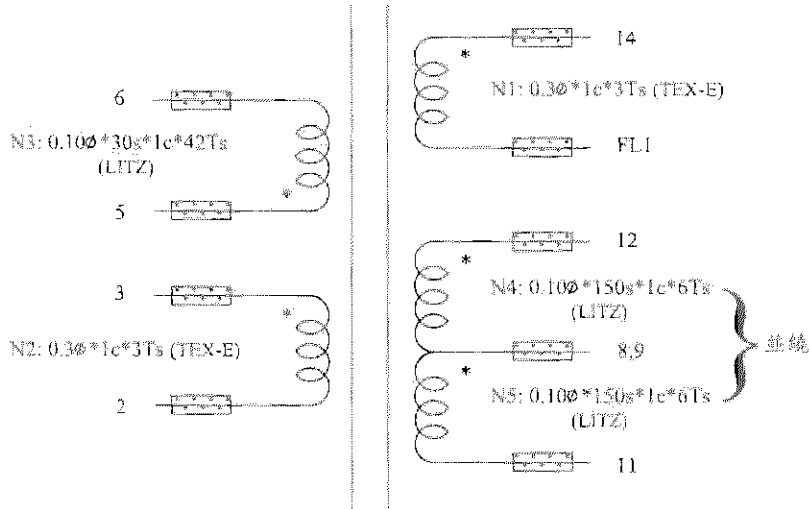
SOLDER
 MYLAR TAPE



SPECIFICATION

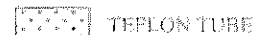
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MODEL NO.	LP-33A29	DATE	2010-05-29	REV.	1.1	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

- 1.一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
- 2.出入線加TEFLON TUBE.
- 3.N1,N2用三層絕緣線繞制.
- 4.N1繞於初級BOBBIN靠PIN端權且于PIN14處出入線(FL1加黑色TEFLON TUBE).
- 5.N4,N5為雙組並繞密繞.N4由PIN12進PIN9出.N5由PIN8進PIN11出.
- 5.一次側線包MYLAR TAPE 2Ts后再組裝,然后将繞于一次側N1的出線接至PIN14. FL1拉至PIN14旁.





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2066-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A29	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.100*150s*1c(LITZ)	Y	6±0.5	24~36 uH	8 Max
N5	8	11	0.100*150s*1c(LITZ)	Y	6±0.5	24~36 uH	8 Max
Lk	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PIN8,9,11,12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5. MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD.	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號: TF-2067-R0
CUSTOMER PARTS NO.

品 名: TRANSFORMER
PARTS NAME

規 格: LP-3320 H (14P) 1.34~1.5 mH
SPECIFICATION



昱京料號: LP-33A28
YU JING PARTS NO.

版 本: 第1.1版
REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

昱京科技股份有限公司
YU JING TECHNOLOGY CO.,LTD.
台北縣三峽鎮隆恩街192號
NO.192,LUNG EN ST.,SANXAI
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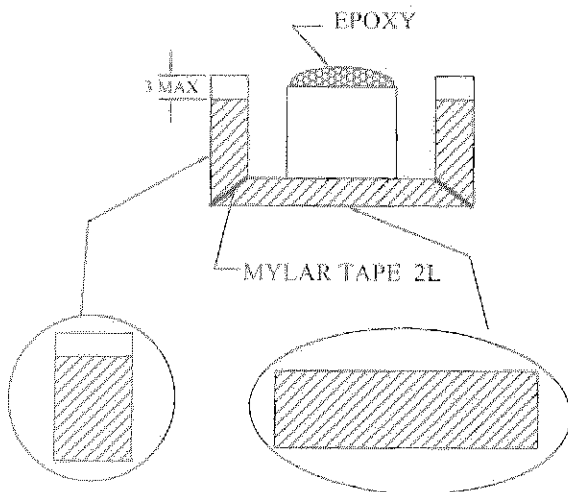
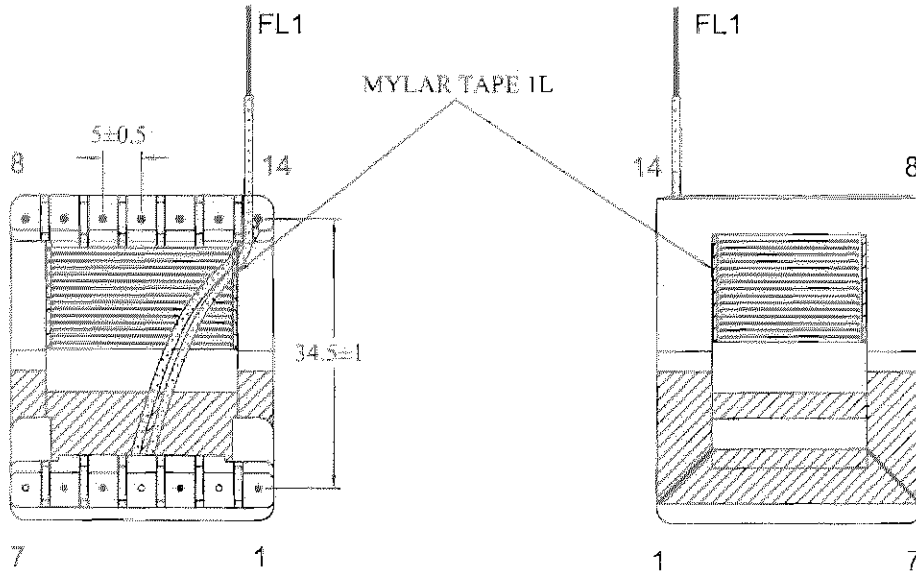
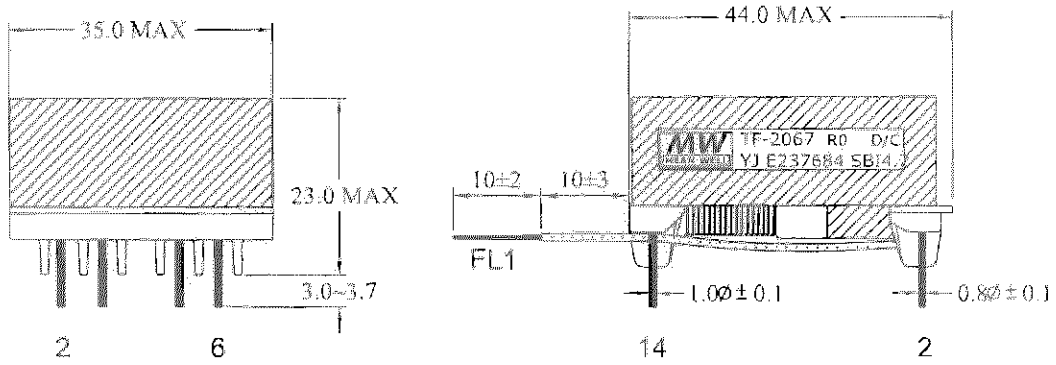




SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2067-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A28	DATE	2010-05-29	REV.	J.1	SHEET	2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



- NOTE:
- PIN1,4,7 CUT OFF.
 - 初級CORE需用25mm MYLAR TAPE包面2L.
 - 初級BOBBIN加裝護套後再組裝鐵芯.
 - CORE中柱點膠且初級與次級組裝要緊密.
 - GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
 - 錫點勿超出BOBBIN支點.
 - FLI(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

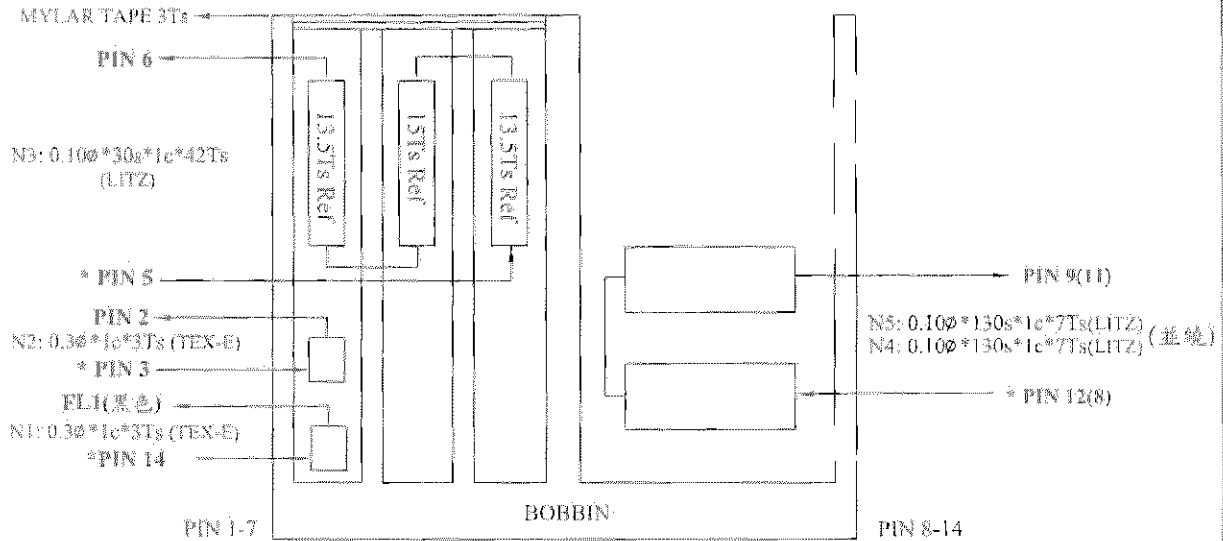
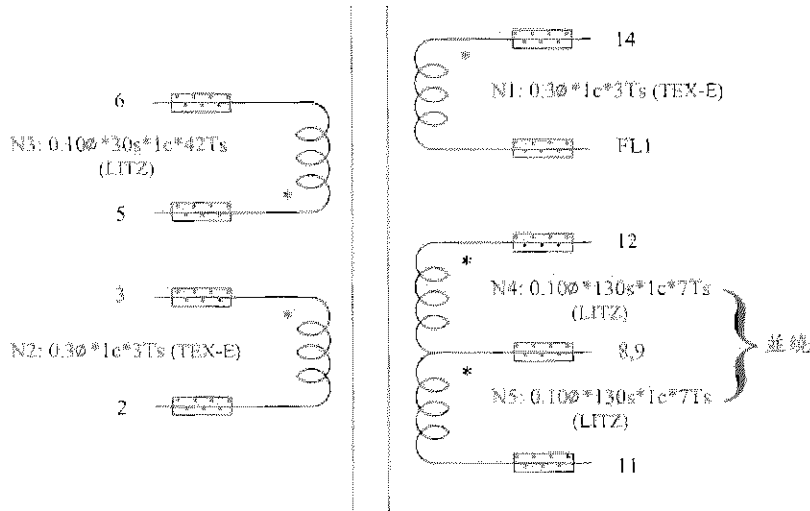
SOLDER
 MYLAR TAPE



SPECIFICATION

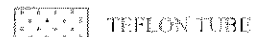
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MODEL NO.	LP-33A28	DATE	2010-05-29	REV.	1.1	SHEET	3 OF 4

2. WINDING ORDER



NOTE:

1. 一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
2. 出入線加TEFLON TUBE.
3. N1,N2用三層絕緣線繞制.
4. N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入線(FL1加黑色TEFLON TUBE).
5. N4,N5為雙組並繞密繞.N4由PIN12進PIN9出,N5由PIN8進PIN11出.
5. 一次側線包包MYLAR TAPE 2Ts后再組裝,然後將繞于一次側N1的出線接至PIN14, FL1扭至PIN14旁.





SPECIFICATION

CUSTOMER	明 緯	PART NO.	TF-2067-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A28	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3. ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.100*130s*1c(LITZ)	Y	7±0.5	32.8~49.3 uH	10.5 Max
N5	8	11	0.100*130s*1c(LITZ)	Y	7±0.5	32~48 uH	10.5 Max
Lk	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PIN8,9,11,12 SHORT

4. DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/ 1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/ 1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5. MATERIAL LIST Class B Insulation System:SB14.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVEING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號: TF-2068-R0

CUSTOMER PARTS NO.

品 名: TRANSFORMER

PARTS NAME

規 格: LP-3320 H (14P) 1.34~1.5 mH

SPECIFICATION

昱京料號: LP-33A27

YU JING PARTS NO.



版 本: 第1.1版

REVISION NO.

承 認 欄		
單位主管 APPROVED BY	確認者 CHECKED BY	擔當者 PREPARED BY

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 YU JING TECHNOLOGY CO.,LTD.
 台北縣三峽鎮隆恩街192號
 NO.192,LUNG EN ST.,SANXAI
 TOWN,TAIPEI HSIEN,R.O.C
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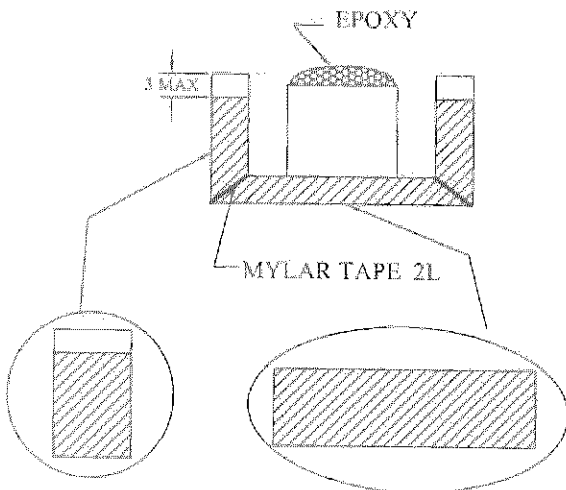
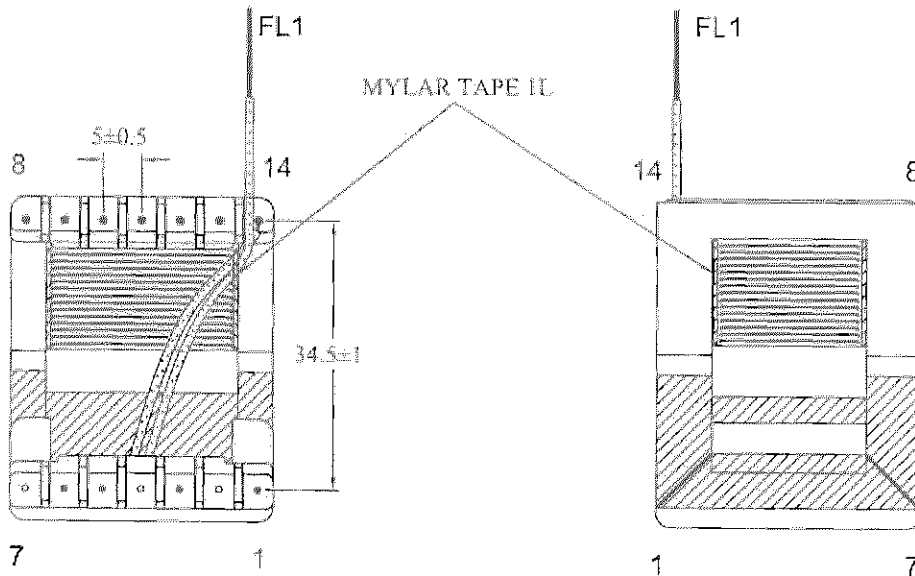
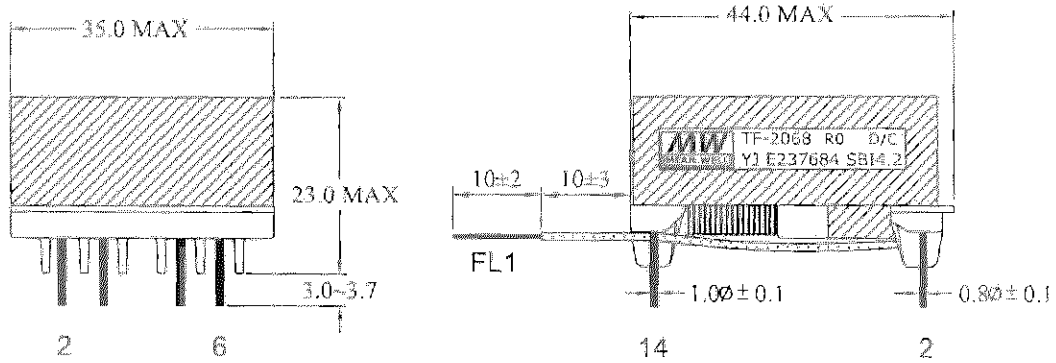




SPECIFICATION

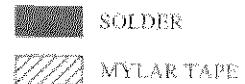
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MODEL NO.	LP-33A27	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

I.MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN1,4,7 CUT OFF.
2. 初級CORE需用25mm MYLAR TAPE包面2L.
3. 初級BOBBIN加裝護套後再組裝鐵芯.
4. CORE中柱點膠且初級與次級組裝要緊密.
5. GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts.
6. 錫點勿超出BOBBIN支點.
7. FL1(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示.

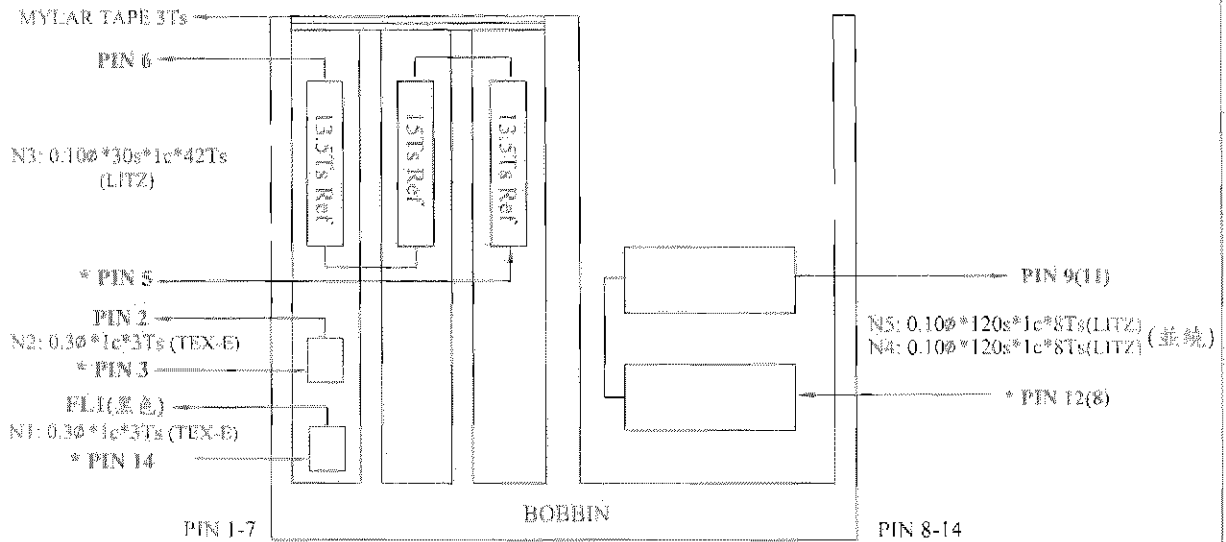
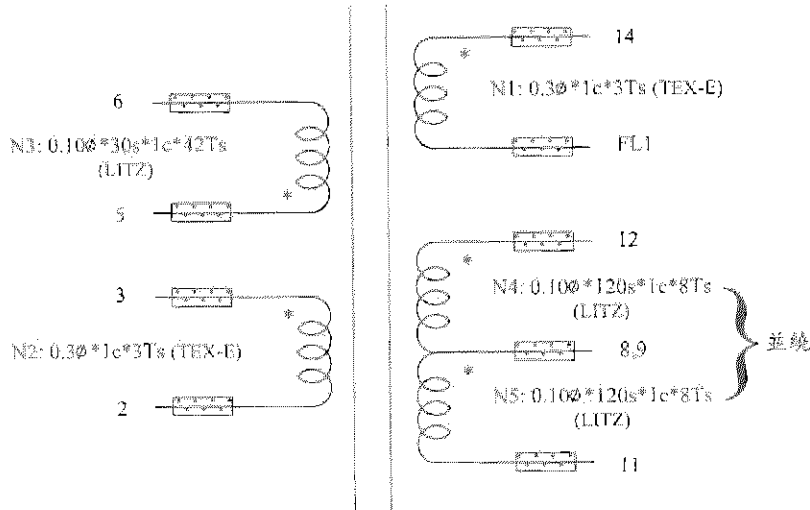




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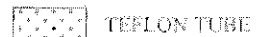
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MODEL NO.	LP-33A27	DATE	2010-05-29	REV.	1.1	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

- 一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製。
- 出入口線加TEFLON TUBE。
- N1,N2用三層絕緣線繞制。
- N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入口線(FL1加黑色TEFLON TUBE)。
- N4,N5為雙組並繞密繞,N4由PIN12進PIN9出,N5由PIN8進PIN11出。
- 一次側線包MYLAR TAPE 2Ts后再組裝,然後將繞于一次側N1的出線接至PIN14, FL1拉至PIN14旁。





SPECIFICATION

CUSTOMER	明緯	PART NO.	TF-2068-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A27	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4284A ZENTECH : 3200B, 502A, F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FL1	0.3Ø*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	75 Max
N2	3	2	0.3Ø*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	55 Max
N3	5	6	0.1Ø*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.1Ø*120s*1c(LITZ)	Y	8±0.5	42.4~63.6uH	13 Max
N5	8	11	0.1Ø*120s*1c(LITZ)	Y	8±0.5	41.6~62.4uH	13 Max
Lk	5	6	0.1Ø*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PINS 9, 11, 12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

5.MATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

客戶名稱: 明緯企業股份有限公司

承 認 書
APPROVAL SHEET

客戶料號: TF-2069-R0
CUSTOMER PARTS NO.

品 名: TRANSFORMER
PARTS NAME

規 格: LP-3320 H (14P) 1.34~1.5 mH
SPECIFICATION



昱京料號: LP-33A43
YU JING PARTS NO.

版 本: 第1.1版
REVISION NO.

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		譚豔妮	2010.05.29

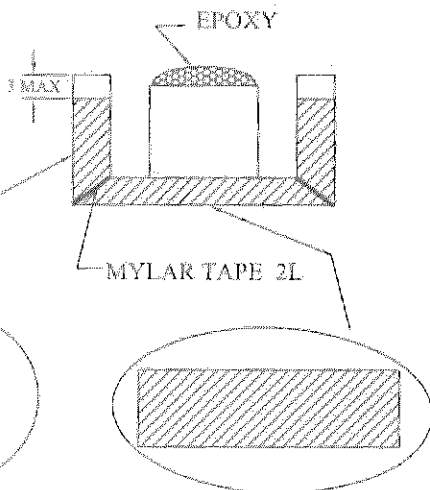
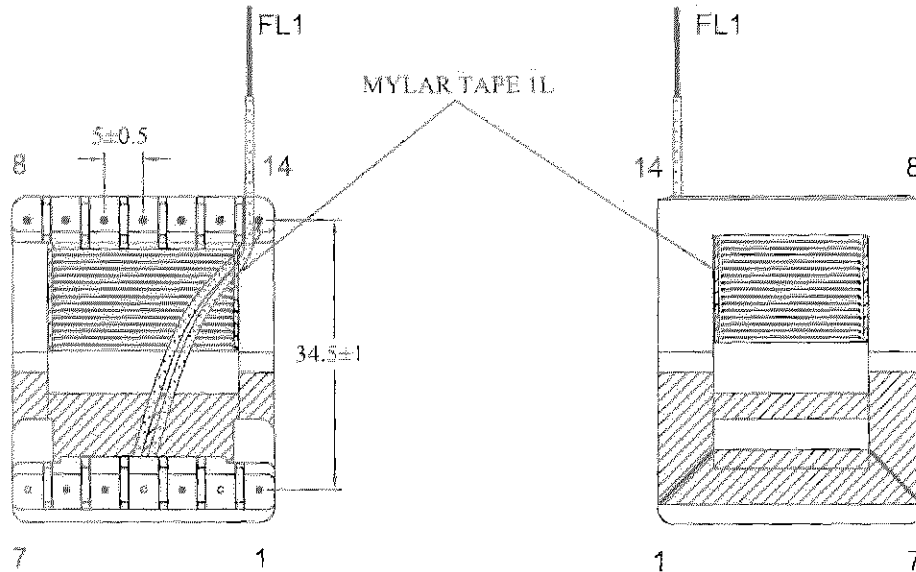
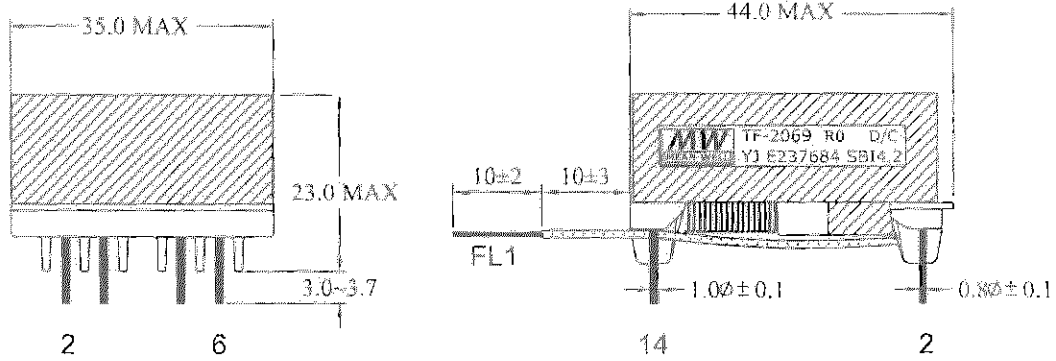




SPECIFICATION

CUSTOMER	明 緯	PART NO.	TF-2069-R0	DESCRIPTION	LP-3320H (14P)	
MODEL NO.	LP-33A43	DATE	2010-05-29	REV.	1.1	SHEET 2 OF 4

I. MACHENIC DIMENSION (UNIT:mm)



- NOTE:
- PIN1,4,7 CUT OFF;
 - 初級CORE需用25mm MYLAR TAPE包面2L;
 - 初級BOBBIN加裝護套後再組裝鐵芯;
 - CORE中柱點膠且初級與次級組裝要緊密;
 - GAP CORE組裝於次級側, CORE外包MYLAR TAPE 3Ts;
 - 錫點勿超出BOBBIN支點;
 - FLI(黑色TEFLON TUBE)出線於PIN14旁,長度如外觀圖所示;

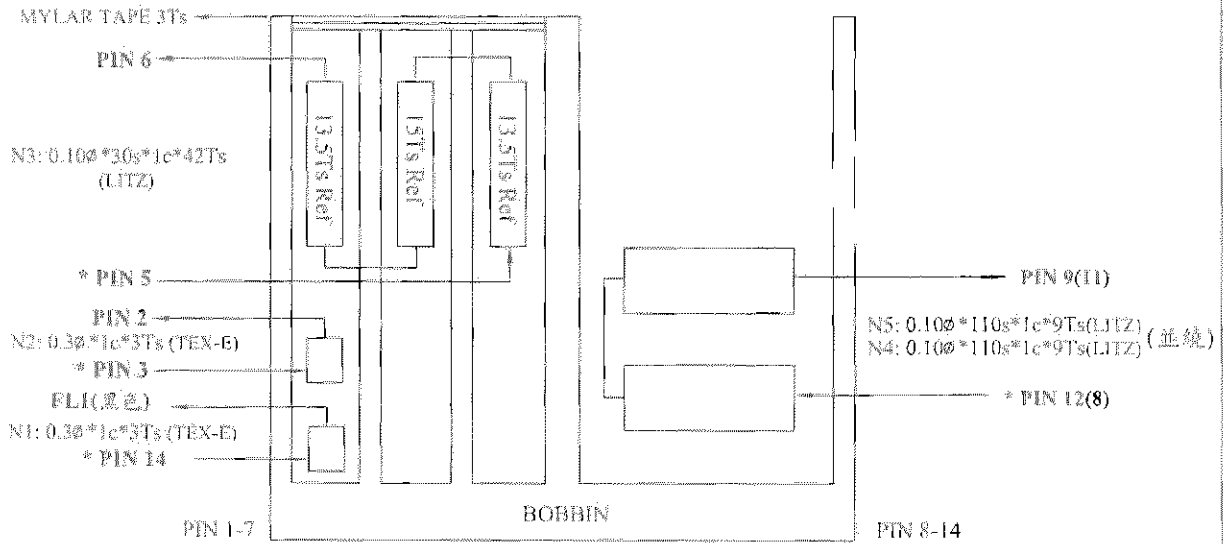
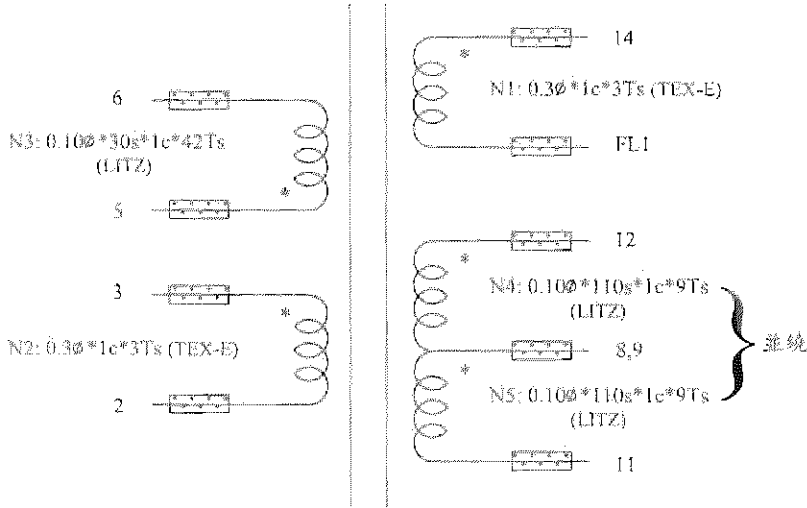
SOLDER
 MYLAR TAPE



SPECIFICATION

CUSTOMER	明 緯	PART-NO.	TF-2069-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A43	DATE	2010-05-29	REV.	L1	SHEET	3 OF 4

2. WINDING ORDER



NOTE:

- 一次側BOBBIN PIN朝向機台內繞製,二次側BOBBIN PIN朝向機台外繞製.
- 出入線加TEFLON TUBE.
- N1,N2用三層絕緣線繞制.
- N1繞於初級BOBBIN靠PIN端槽且于PIN14處出入線(FL1加黑色TEFLON TUBE).
- N4,N5為雙組並繞密繞,N4由PIN12進PIN9出,N5由PIN8進PIN11出.
- 一次側線包MYLAR TAPE 2Ts后再細裝,然后将繞于一次側N1的出線接至PIN14, FL1拉至PIN14旁.





SPECIFICATION

CUSTOMER	明峰	PART NO.	TF-2069-R0	DESCRIPTION	LP-3320H (14P)		
MODEL NO.	LP-33A43	DATE	2010-05-29	REV.	1.1	SHEET	4 OF 4

ELECTRICAL SPECIFICATION

IMP: 4784A ZENTECH : 3200B , 502A , F = 50KHz V = 0.25V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
N1	14	FLJ	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	75 Max
N2	3	2	0.30*1c(TEX-E)	Y	3±0.5	6.4~9.6 uH	55 Max
N3	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	1.34~1.5 mH	215 Max
N4	12	9	0.100*110s*1c(LITZ)	Y	9±0.5	53.6~80.4 uH	14.5 Max
N5	8	11	0.100*110s*1c(LITZ)	Y	9±0.5	52.8~79.3uH	14.5 Max
N6	5	6	0.100*30s*1c(LITZ)	Y	42±0.5	165~176 uH	@PIN8,9,11,12 SHORT

DIELECTRIC STRENGTH

WITCH TAKING VOLTAGE: 4.0KV/1SEC/AC/1 mA , PRIMARY TO SECONDARY
4.0KV/1SEC/AC/1 mA , PRIMARY TO CORE

INSULATION RESISTANCE: 100M Ohm /DC 500V.

SEMIMATERIAL LIST Class B Insulation System:SBI4.2

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429
3	CORE	LP-33 3C94	FERROXCUBE	
4	WIRE	TM-Litz-4-2	TEONGMAO ENTERPRISE CO., LTD.	E220377
		TM-@-4#		
5	THREE INSULATION WIRE	TEX-E	FURUKAWA ELECTRC CO.,LTD.	E206440
		TIW-2X	TOTOKU ELECTRIC CO.,LTD	E166483
6	WINDING TAPE	#1350F-1	3M COMPANY	E17385
7	SLEEVEING	TFL	GREAT HOLDING INDUSTRIAL CO., LTD.	E156256
8	ADHESIVE	3300A/B	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090
9	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO.,LTD.	E72979

TEST RECORD NO. 2

SAMPLES:

Samples of Power supply HLG-150-12, HL-150-54, HLG-185-12,

HL-185-54 as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

General:

No testing was considered necessary to make revisions to file as requested based on previous investigations under Test Record No. 1.

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements and below Standards, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Latest Revision Date
UL 8750	Light Emitting Diode (LED) Light Sources for Use in Lighting Products	1 st	2012/10/17
CSA C22.2 No. 250.13-12	LIGHT EMITTING DIODE (LED) EQUIPMENT FOR LIGHTING APPLICATIONS	1st Edition	2012/01/01
UL 1310	Class 2 Power Units	6 th	2012/07/25
CSA C22.2 no. 223	Power Supplies with Extra low voltage class 2 outputs	Edition 2	2009/09/01

Test Record by:

Reviewed by :

Nilofar Jabbar

Nazir S. Gouhary

Project Handler

Senior Project Engineer

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