CERTIFICATE OF COMPLIANCE

Certificate Number	20161117-E317867
Report Reference	E317867-A92-UL
Issue Date	2016-NOVEMBER-17
Issued to:	XP POWER L L C 15641 RED HILL AVE, SUITE 100 TUSTIN CA 92780
This is to certify that representative samples of	COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL BUSINESS EQUIPMENT SEE ADDENDUM PAGE
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 60950-1 & CAN/CSA C22.2 No. 60950-1-07 Information Technology Equipment - Safety - Part 1: General Requirements
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

The UL Recognized Component Mark 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.

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 Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	20161117-E317867
Report Reference	E317867-A92-UL
Issue Date	2016-NOVEMBER-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

Switching Power Supply for building-in
UCP225PSXX-Y-Z-@@-####### (where XX can be any number between 12 and 48 designating the output voltage, Y can be "A" or blank to represent additional 5V standby output, Z can be "T" or blank to represent terminal block, @@ can be "TF" to represent Top Cover with Fan or "C" to represent Top cover or blank, ####### can be blank or alphanumeric character for marketing purposes only), may also be provided with suffix "SF"

Bruce Mahrenholz, Director North American Certification Program

UL LLC

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	Switching Power Supply for building-in
Model:	UCP225PSXX-Y-Z-@@-######## (where XX can be any number between 12 and 48 designating the output voltage, Y can be "A" or blank to represent additional 5V standby output, Z can be "T" or blank to represent terminal block, @@ can be "TF" to represent Top Cover with Fan or "C" to represent Top cover or blank, ######## can be blank or alphanumeric character for marketing purposes only), may also be provided with suffix "SF"
Rating:	Input: 100-240 Vac, 50/60 Hz, 3 A Output: See Model Differences for Output Ratings details.
Applicant Name and Address:	XP POWER L L C 15641 RED HILL AVE, SUITE 100 TUSTIN CA 92780 UNITED STATES

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Robert Leon/Project Handler Reviewed by: Walid Beytoughan/Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.

ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.

iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

The product is a AC/DC switching mode power supply with open-frame type, and it is intended for building-in from factory installation as a component of the end product Information Technology Equipment (ITE).

Model Differences

All models in the Model UCP225PSXX series are identical with exception to the Mains Transformer, TR1, and minor secondary components that allow for different output voltage ratings.

Additional suffix as below

Additional Suffix Y- can be "A" to represent additional 5V standby output
Convection cooling - For Tma @50 °C, 70 °C - 5Vdc, 1A, for Tma @ 85 °C - 5Vdc, 0.5A
Forced cooling For Tma @50 °C - 5Vdc, 2A, for Tma @ 70 °C - 5V, 1A, for Tma @ 85 °C - 5Vdc, 0.8A
Additional Suffix Z - can be "T" to represent terminal block
Additional Suffix @@ - can be "TF" to represent Top Cover with Fan or "C" to represent Top cover
Additional Suffix ####### - can be alphanumeric for represent marketing purposes only
Additional Suffix "SF" denotes units provided with only a single line side fuse.

Model output ratings as follows.

Convection cooling
ECP225PS12: 12Vdc (10.1 - 13.5 Vdc), 12.5 A max, 150W max
ECP225PS15: 15Vdc (13.6 - 17 Vdc) , 10 A max, 150W max
ECP225PS18: 18Vdc (17.1 - 21 Vdc) , 8.33 A max, 150W max
ECP225PS24: 24Vdc (21.1 - 26 Vdc) , 6.25 A max, 150W max
ECP225PS28: 28Vdc (26.1 - 31 Vdc) , 5.36 A max, 150W max.
ECP225PS36: 36Vdc (31.1 - 42 Vdc) , 4.16 A max, 150W max.
ECP225PS48: 48Vdc (42.1 - 52 Vdc) , 3.1 A max, 150W max

Model Name (Forced cooling)
ECP225PS12: 12Vdc (10.1 - 13.5 Vdc), 18.75 A max, 225W max
ECP225PS15: 15Vdc (13.6 - 17 Vdc) , 15 A max, 225W max
ECP225PS18: 18Vdc (17.1 - 21 Vdc) , 12.5 A max, 225W max
ECP225PS24: 24Vdc (21.1 - 26 Vdc) , 9.38 A max, 225W max
ECP225PS28: 28Vdc (26.1 - 31 Vdc) , 8.04 A max, 225W max.
ECP225PS36: 36Vdc (31.1 - 42 Vdc) , 6.25 A max, 225W max
ECP225PS48: 48Vdc (42.1 - 52 Vdc) , 4.69 A max, 225W max

See Enclosure - Miscellaneous 7-02 for de-rating Table.

Technical Considerations

- Equipment mobility : movable
- Connection to the mains : not directly connected to the mains
- Operating condition : continuous
- Access location : for building-in
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10% (manufacturer declared)
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : determined by end product
- Considered current rating of protective device as part of the building installation (A) : 20 A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : up to 5000 m
- Altitude of test laboratory (m) : less than 2000 m
- Mass of equipment (kg) : 0.44
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50°C for full load; 70°C for half load, 85 °C for 25% load at convectional cooling and 40% at force air cooling.
- The product is intended for use on the following power systems: TN
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 (which includes all European national differences, including those specified in this test report).
- According to IEC60664-1, Table A2, required Clearances have been adjusted by multiplying the clearance at sea level by a factor of 1.48 for operating at an altitude of 5000 meters. The correction factor is based on barometric pressure of 70kPa and Overvoltage Category II. If the calculated Clearance exceeded the Creepage, the Creepage was adjusted to the value of clearance.
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Load side of CY7, CY8, CY9

Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- End-product shall provide an external forced air cooling, min. 13 CFM, towards DUT, located at input connector with a distance of 4 cm.
- Units provided with fuses in the line and neutral shall be considered for the need for "Double Pole Fusing" warning markings as part of the end-product.
- The following Production-Line tests are conducted for this product: Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 275 Vrms, 500 Vpk
- The following secondary output circuits are SELV: ECP225PS12: 12 Vdc, ECP225PS15: 15 Vdc,

ECP225PS24: 24 Vdc, ECP225PS28: 28 Vdc, ECP225PS48: 48 Vdc

- The following secondary output circuits are at hazardous energy levels: ECP225PS12: 12 Vdc, ECP225PS15: 15 Vdc, ECP225PS24: 24 Vdc, ECP225PS28: 28 Vdc, ECP225PS48: 48 Vdc
- The following secondary output circuits are Limited Current Circuits: Load side of CY7, CY8, CY9
- The following output terminals were referenced to earth during performance testing: TR1 pin 9.
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- Proper bonding to the end-product main protective earthing termination is: Required
- An investigation of the protective bonding terminals has: Not been conducted
- The following input terminals/connectors must be connected to the end-product supply neutral: CN1 pin 2
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class 105(A): TR1 - Class 130(B)
- The following end-product enclosures are required: Electrical, Mechanical, Fire
- Printed Wiring Board rated 130°C.
- The clearance and creepage distances have additionally been assessed for suitability up to 5000 m elevation.

Additional Information

In addition, two alternate label systems were added to report (Brady Worldwide, Type B-423 and 3M, Types 7816 or 7818) based on previous evaluation for this manufacturer.

Additional Standards

The product fulfills the requirements of: EN 60950-1:2006 + A1:2010 + A11:2009 + A12:2011 + A2:2013

Markings and instructions

Clause Title	Marking or Instruction Details
1.7.1 Power rating - Ratings	Ratings (voltage, frequency/dc, current)
1.7.1 Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
1.7.1 Power rating - Model	Model Number

Special Instructions to UL Representative

Inspect the transformer(s) listed in BD1.1 per AA1.1– (C). When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in BD1.1 be conducted at the component manufacturer.

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
All models	Transformer TR1	N/A	Primary winding to secondary winding	3000	4242	1

Earthing Continuity Test Exemptions - This test is not required for the following models:

All models

Electric Strength Test Exemptions - This test is not required for the following models:

--

Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:

--

Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
--	--	--	--	--	--

1.5.1	**TABLE: list of critical components**					Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
U-Chassis	Interchangeable	Interchangeable	U-Shaped Approx. 30 x 126 x 80 mm, 2mm thickness, aliminuin	--	--	
Insulation sheet	Dupont	Nomex 410	U-Shaped Approx. 12 x 125x78 mm,found between U-chassis and PCB	QMFZ2 (E34739)	UL	
Top fan cover - Cover	Interchangeable	Interchangeable	Rectangle, approx. 125 x 80mm. optional opening of 49mm diameter for built-in fan option. See fan for Fan detail	--	--	
Top fan cover - Fan	Global Win	GW5010 Series	Approx. 11.4 CFM min, rated 12Vdc, 0.15A min	GPWV2 (E354247)	UL	
Top cover	Interchangeable	Interchangeable	Rectangle, approx. 125 x 80mm. with multiply opening approx. 25 x 5mm	--	--	
1.Primary Connector (CN1)	Long Chu Electronics co., ltd.	P101	Rated 7A, 250V, min. 85°C (Internal Connection only).	ECBT2 (E94662)	UL	
1a.Primary Connector (CN1) (Alternate)	Degson Electronics Co., Ltd.	DG350	Rated 7A, 250V, min. 85°C (Internal Connection only).	ECBT2 (E228872)	UL	
1b.Primary Connector (CN1)	Long Chu Electronics co., ltd.	P3060G	Rated 7A, 250V, min. 85°C (Internal Connection only).	ECBT2 (E94662)	UL	
2. Secondary Connector (CN2,CN3) (SELV)	Long Chu Electronics co., ltd.	P101	Rated min. 12 A, min. 48 V, min. 85°C	ECBT2 (E94662)	UL	
2a. Secondary Connector (CN2,CN3) (SELV) (Alternate)	Interchangeable	Interchangeable	Rated min. 12A, min. 12V, min. 85°C	ECBT2	UL	
3. Fuses (F1, F2)	Cooper Bussmann	SS-5 Series	Rated T4 A, 250 V, 105°C, soldered to PWB	JDYX2	UL	
3a. Fuses (F1, F2) - (Alternate)	Conquer electronics co., ltd	Type MST	Rated T4 A, 250 V, 105°C, soldered to PWB	JDYX2	UL	
4. Thermistor (TH1) (Not relied on for safety)	Interchangeable	Interchangeable	NTC. Rated 240 V, 150°C., 1.3 ohm max, Iss min. 5 A.	--	--	
5. Bridge Diodes (BD1)	Interchangeable	Interchangeable	Rated voltage (rms) 600 V,	--	--	

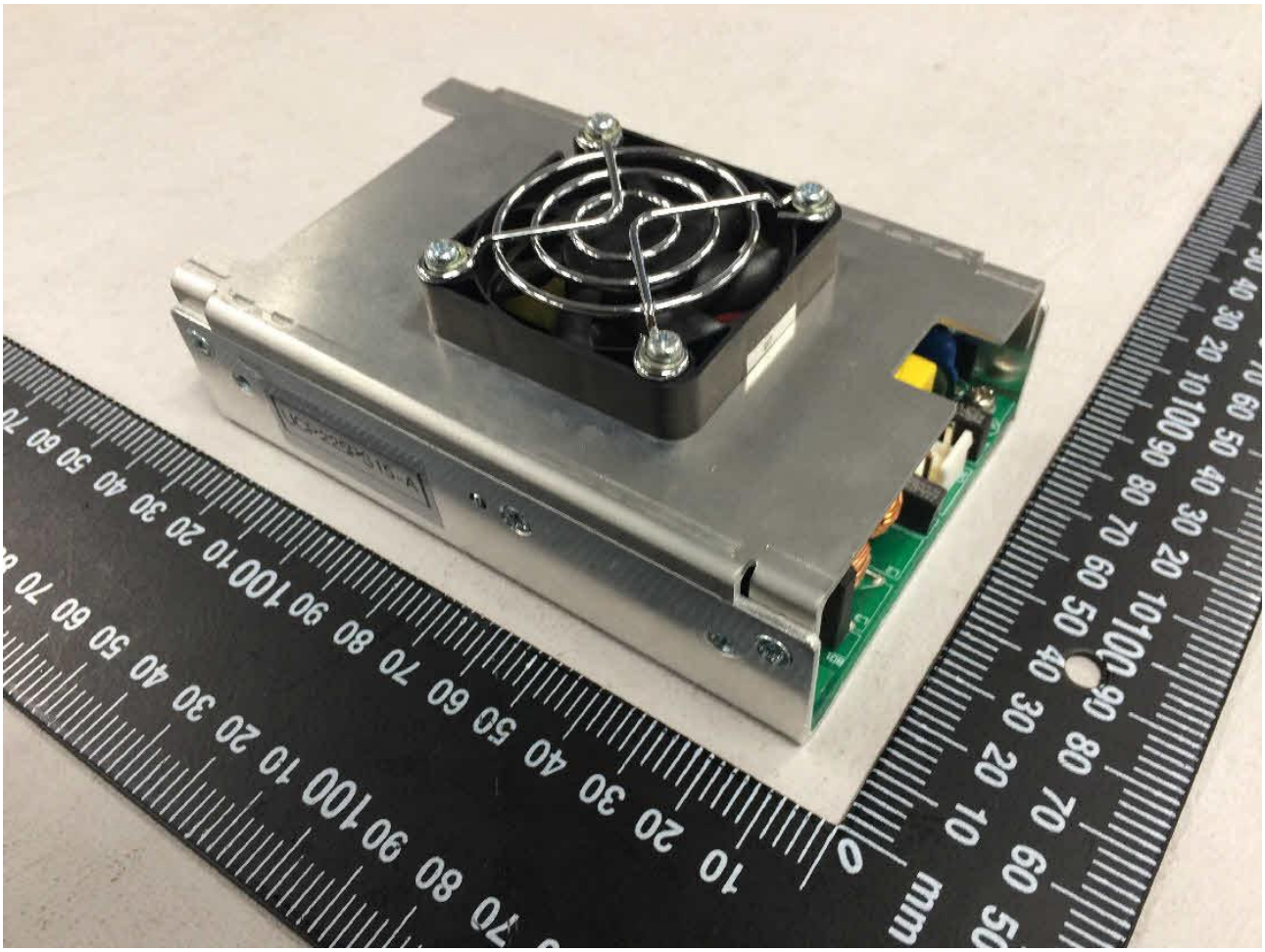
			min. 10 A, 150°C.			
6. X-Capacitors (CX1)	Carli Electronics Co., Ltd.	MPX Series	Rated max. 0.68uF, min. 275 V, min. 100°C, marked "X2".	FOWX2	UL	
6a. X-Capacitors (CX1)	Hua Jung Co., Ltd.	MKP Series	Rated max. 0.68uF, min. 275 V, min. 100°C, marked "X2".	FOWX2	UL	
7. Y-Capacitors (CY1, CY2,CY3, CY4) - Optional	TDK Corp	CD	Rated max. 1500 pF, min. 250 Vac, 125°C, marked “Y1”.	FOWX2	UL	
8. Y-Capacitors (CY7, CY8,CY9) - Optional	TDK Corp	CD	Rated max. 1000 pF, min. 250 Vac, 125°C, marked “Y1”.	FOWX2	UL	
9. Electrolytic Capacitor (C2) (PRI)	Interchangeable	Interchangeable	Rated 150 uF, min. 400 V, 105°C. Provided with integral pressure relief.	--	--	
10. MOSFET (Q1) (PRI)	Interchangeable	Interchangeable	Rated min. 500 V, Mounted to U-chassis using screw.	--	--	
11. MOSFET (Q2, Q3) (PRI)	Interchangeable	Interchangeable	Rated min. 500 V, solder on PCB	--	--	
12. Optical Isolators (IC3, IC13)	Lite-On	LTV-817 Series (LTV-817, LTV-817M, LTV-817S)	Double protection, isolation voltage min. 5000 V	FPQU2 (E113898)	UL	
11a. Optical Isolators (IC3, IC13) (Alternate)	Renesas	PS2561 Series	Double protection, isolation voltage min. 5000 V	FPQU2 (E72422)	UL	
11b. Optical Isolators (IC3, IC13) (Alternate)	Vishay	TCET1100-TCET1105 Series	Double protection, isolation voltage min. 5000 V	FPQU2 (E76222)	UL	
11c. Optical Isolators (IC3, IC13) (Alternate)	Fairchild Semiconductor	H11A817A or H11A817B or H11A817C	Double protection, isolation voltage min. 4420 V	FPQU2 (E90700)	UL	
11d. Optical Isolators (IC3, IC13) (Alternate)	Sharp	PC817	Double protection, isolation voltage min. 5000 V	FPQU2 (E64380)	UL	
11e. Optical Isolators (IC3, IC13) (Alternate)	Toshiba	TLP781, TLP781F	Double protection, isolation voltage min. 5000 V	FPQU2 (E67349)	UL	
11f. Optical Isolators (IC3, IC13) (Alternate)	Toshiba	TLP621 Series	Double protection, isolation voltage min. 5000 V	FPQU2 (E67349)	UL	
11. Optical Isolators (IC4, IC14)	Toshiba	TLP385 Series	Isolation voltage 5000 V	FPQU2 (E67349)	UL	
11a. Optical Isolators (IC4, IC14)	Vishay	VOL618A Series	Isolation voltage 5000 V	FPQU2 (E76222)	UL	

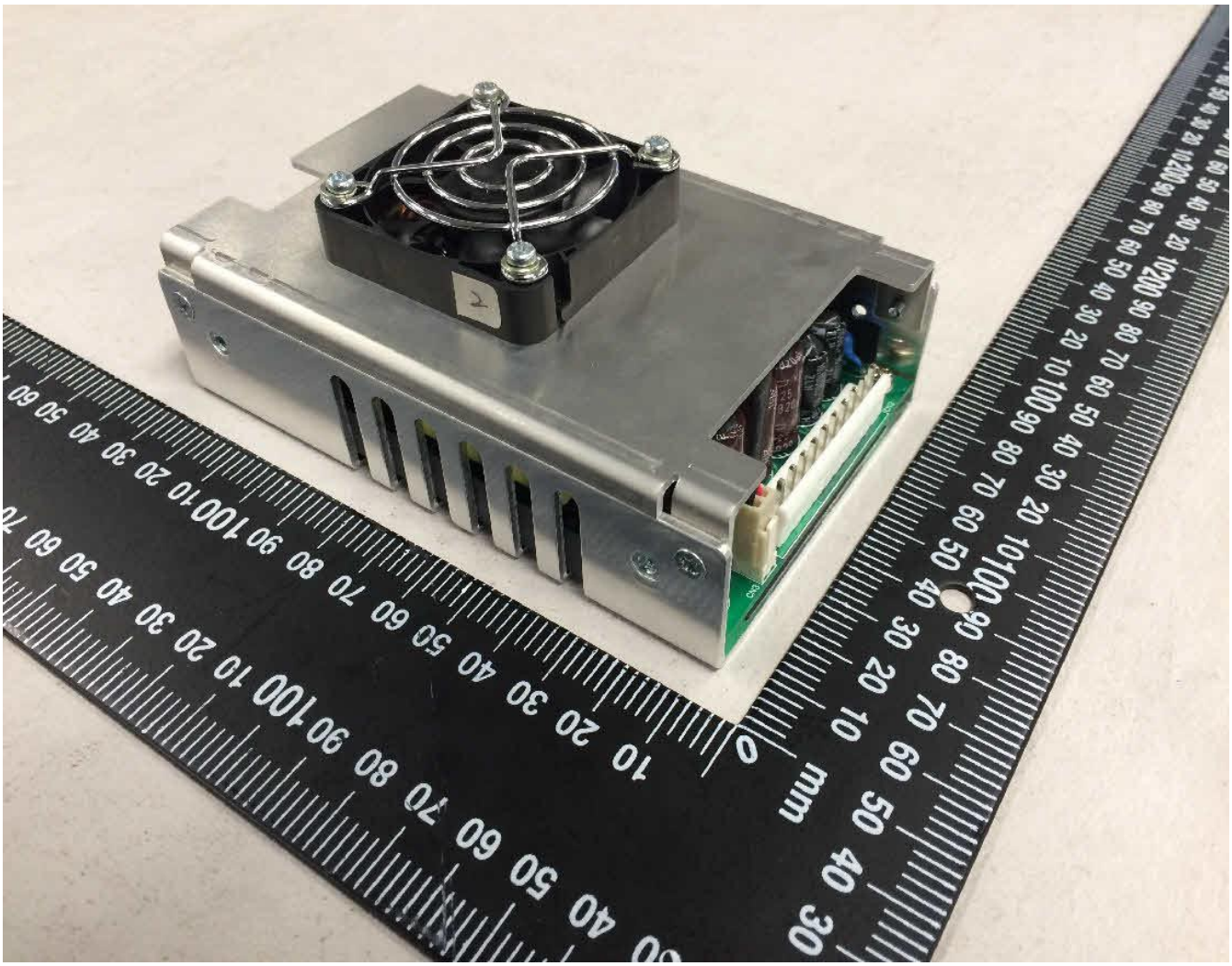
12. Transformer (TR1)	Yu Jing	225-12 (for model UCP225PS12), 225-15 (for model UCP225PS15), 225-24 (for model UCP225PS24), 225-28 (for model UCP225PS28), 225-36 (for model UCP225PS36), 225-48 (for model ECP225PS48)	Insulation system: SBI4.2, Class B,	OBJY2	UL	
12-1. Core	Interchangeable	Interchangeable	Ferrite. Overall 40 x 32 x 14 mm	--	--	
12-2. Bobbin	Sumitomo Bakelite	PM-9820 or PM-9630	Phenolic, min. thickness 0.75 mm, V-0, 150°C.	QMFZ2	UL	
12-3. Insulation tape	3M	1350F-1	Min. 130°C, polyester film tape.	OANZ2	UL	
12-4. Winding wire (pin 1 -2, pin 7 – 8, pin 9 – 10, pin 11 – 12)	Interchangeable	Interchangeable	Rated min. 130 °C.	OBMW2	UL	
12-5. triple insulated wire (pin 5 – pin 6)	Fukukawa Electric	TEX-F	Rated min. 130 °C.	OBJT2	UL	
12-5b. Triple insulated wire (pin 5 – pin 6) (Alternate)	Totoku Electronic	TIW-3X	Rated min. 130 °C.	OBJT2	UL	
12-6. Tubing	Great Holding Industrial	TFL	Rated min. 200 °C.	YDPU2	UL	
12-6A. Tubing - Alternate	Chang Yuan Electronic (ShenZhen) Co., Ltd	TFL	Rated min. 200 °C.	YDPU2	UL	
12-7. Varnish	Hitachi Chemical	WP-2952F-2G	Min. 130°C	OBOR2	UL	
13. Inductor L2	Interchangeable	Interchangeable	Rated min. 130°C.	--	--	
13-1. Core	Interchangeable	Interchangeable	Ferrite. Overall dimension 20 by 12 by 10 mm.	--	--	
13-2. Coil	Interchangeable	Interchangeable	Rated min. 130°C	OBMW2	UL	
13-3. Tubing	Interchangeable	Interchangeable	Min. VW-1; Min. 125ºC; Min. 240V	YDPU2	UL	

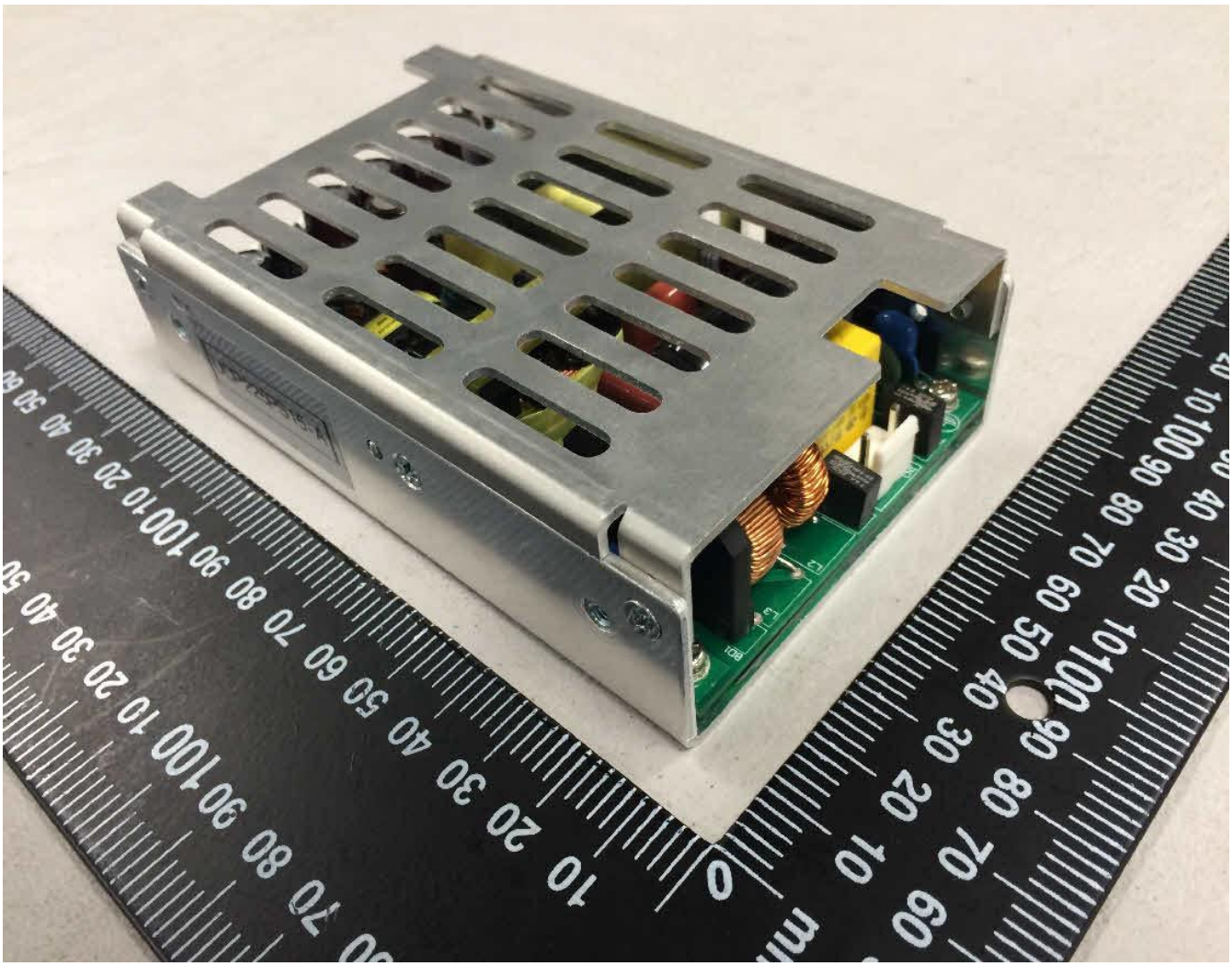
13a. Inductor L2 (Alternate)	Newline Universal Corp	T16*9*5	Rated min. 130°C.	--	--	
14. Inductor L3	Interchangeable	Interchangeable	Rated min. 130°C.	--	--	
14-1. Core	Interchangeable	Interchangeable	Ferrite. Overall dimension 16 by 4.5 by 10 mm.	--	--	
14-2. Coil	Interchangeable	Interchangeable	Rated min. 130°C	OBMW2	UL	
15. Inductor L4	Interchangeable	Interchangeable	Rated min. 130°C.	--	--	
15-1. Core	Interchangeable	Interchangeable	Ferrite. Overall dimension 30 by 23 by 21.5 mm.	--	--	
15-2. Coil	Interchangeable	Interchangeable	Rated min. 130°C	OBMW2	UL	
15-3. Bobbin	Sumitomo Bakelite	PM-9630	Phenolic, min. thickness 0.75 mm, V-0, 150°C.	QMFZ2	UL	
15-4. Insulation tape	3M	1350F-1	Min. 130°C, polyester film tape.	OANZ2	UL	
15-4a. Insulation tape (Alternate)	Jingjiang Yahua Pressure Sensitive Glue	CT	Min. 130°C, polyester film tape.	OANZ2	UL	
15-5. Varnish	Interchangeable	Interchangeable	Rated min. 130°C	OBOR2	UL	
15-6. Tubing	Interchangeable	Interchangeable	Rated min. 130°C	YDPU2	UL	
16. Bleed resistors (R1, R2)	Interchangeable	Interchangeable	Max. 620 kOhm.	--	--	
17. PWB	Interchangeable	Interchangeable	Rated min. V-1, 130°C.	ZMPV2	UL	
18. Insulating Tubing/Sleeving	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min. 80ºC, min. 240V	UZFT2, YDPU2, YDRY2, YDTU2	UL	
21. Label	RONG TAY EMBOSSING PRINTING ART FACTORY	RT-05	Rated at min. 85°C.	PGDQ2	UL	
21a. Label (Alternate)	Interchangeable	Interchangeable	Rated at min. 85°C.	PGDQ2	UL	

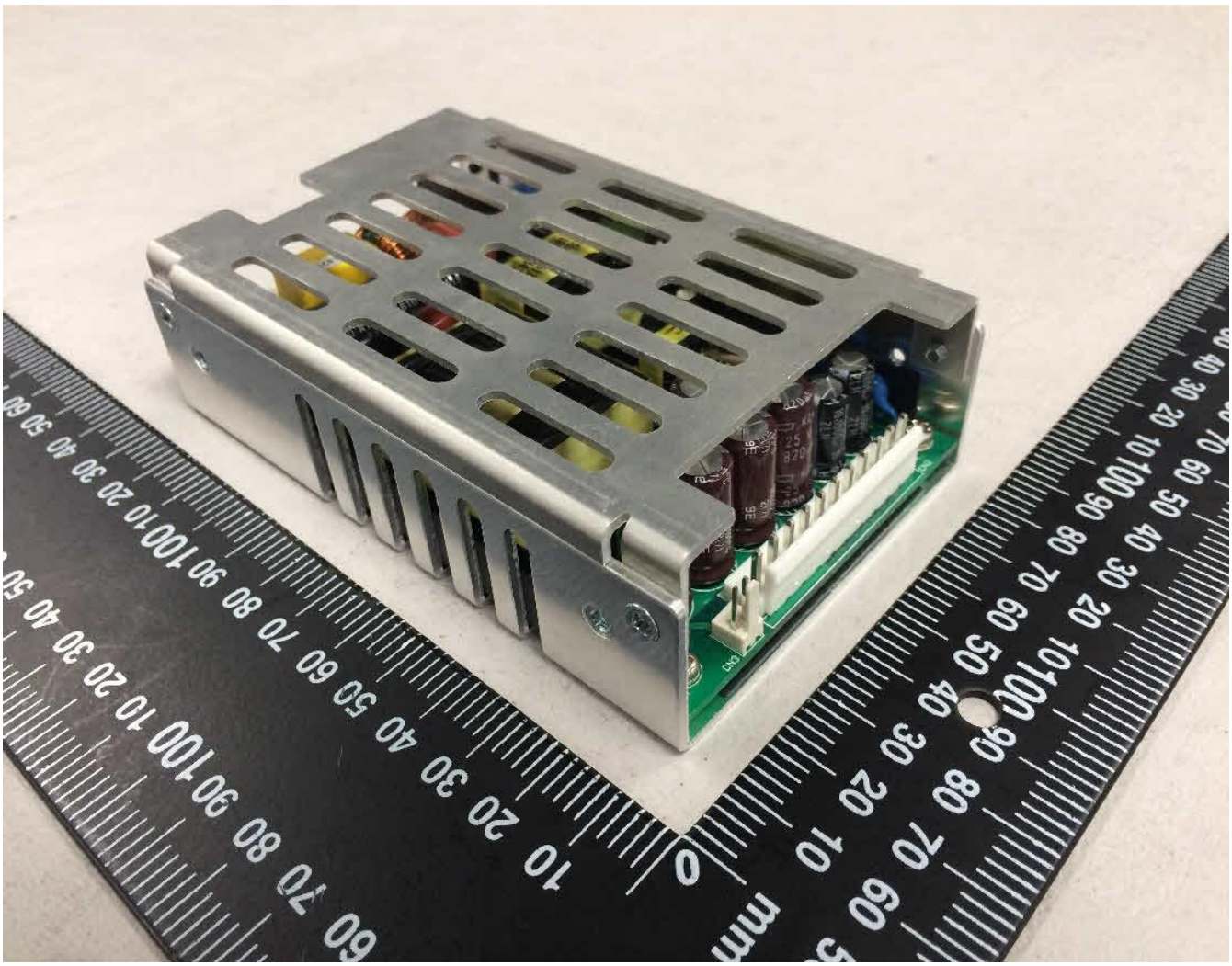
Enclosures

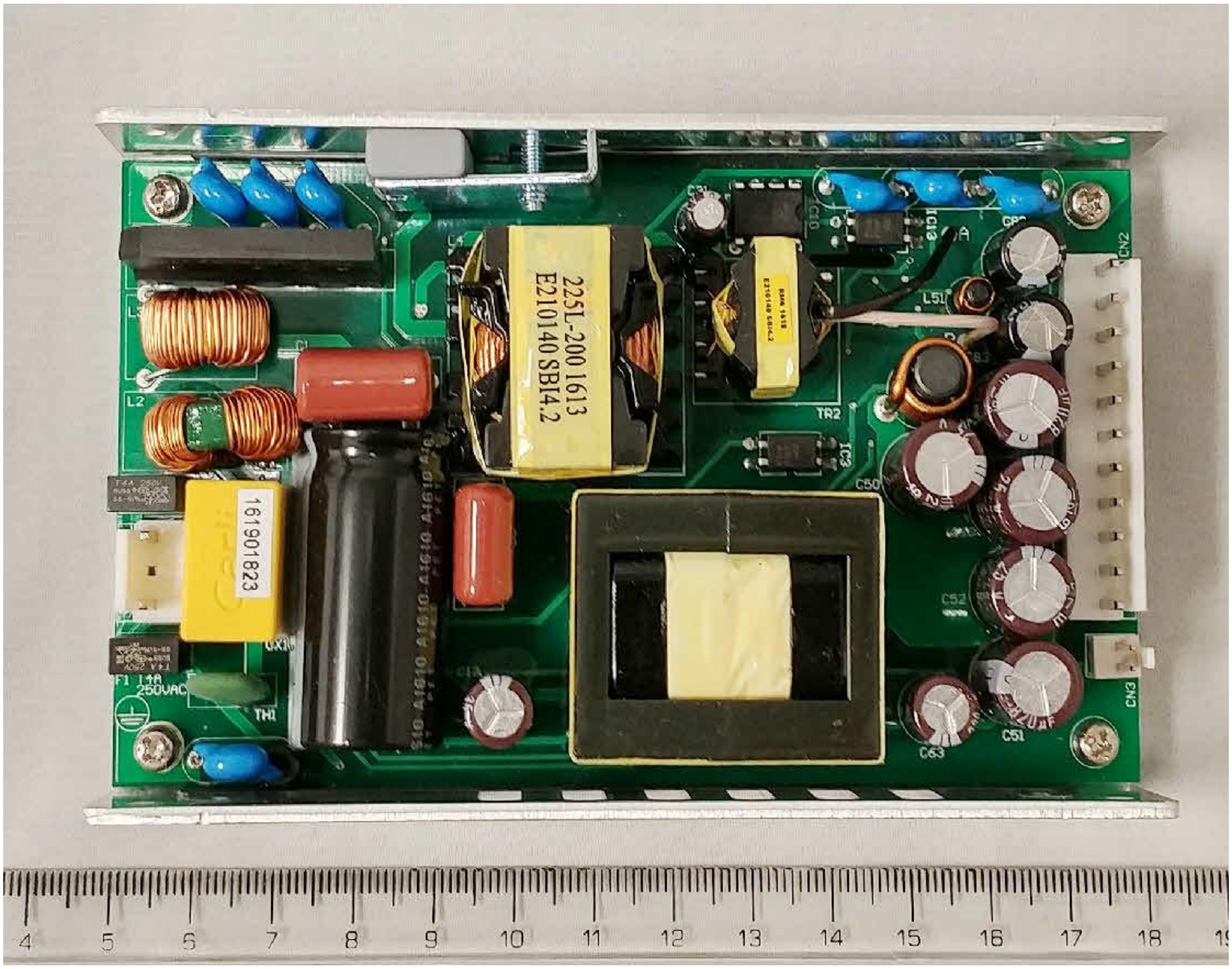
Type	Supplement Id	Description
Photographs	3-01	Top Corner Overall View
Photographs	3-02	Top Corner Output View
Photographs	3-03	Top View No Fan Input Side
Photographs	3-04	Top View No Fan Output Side
Photographs	3-05	Top Internal View
Photographs	3-06	Bottom Chassis View
Photographs	3-07	PWB Solder Side
Diagrams	4-01	TR1-12V
Diagrams	4-02	TR1-15V
Diagrams	4-03	TR1-24V
Diagrams	4-04	TR1-28V
Diagrams	4-05	TR1-36V
Diagrams	4-06	TR1-48V
Diagrams	4-07	Chassis Insulation Sheet
Diagrams	4-08	TR2
Schematics + PWB	5-01	PWB Trace Layouts
Miscellaneous	7-01	Letter of Assurance
Miscellaneous	7-02	De-rating Table







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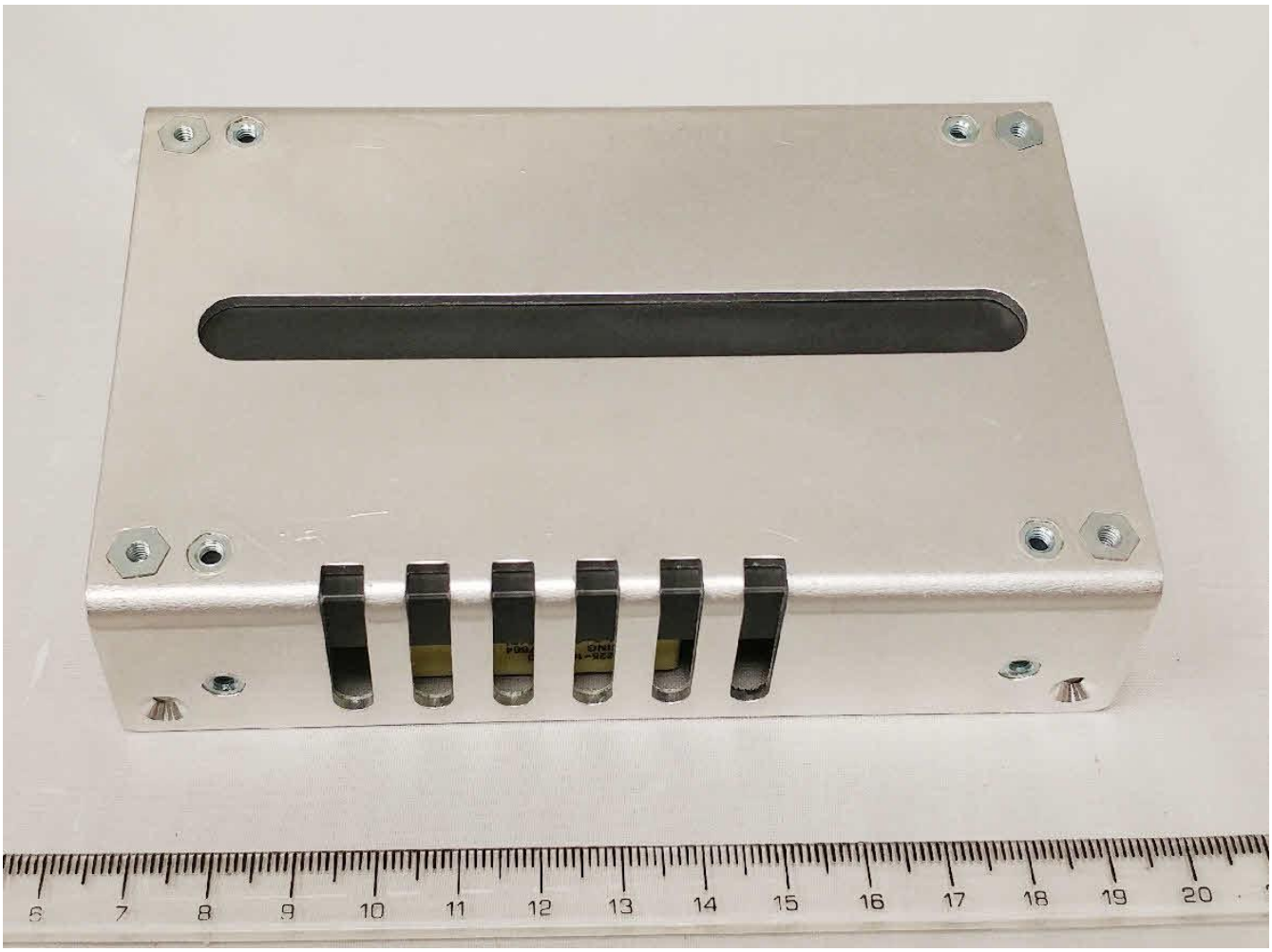
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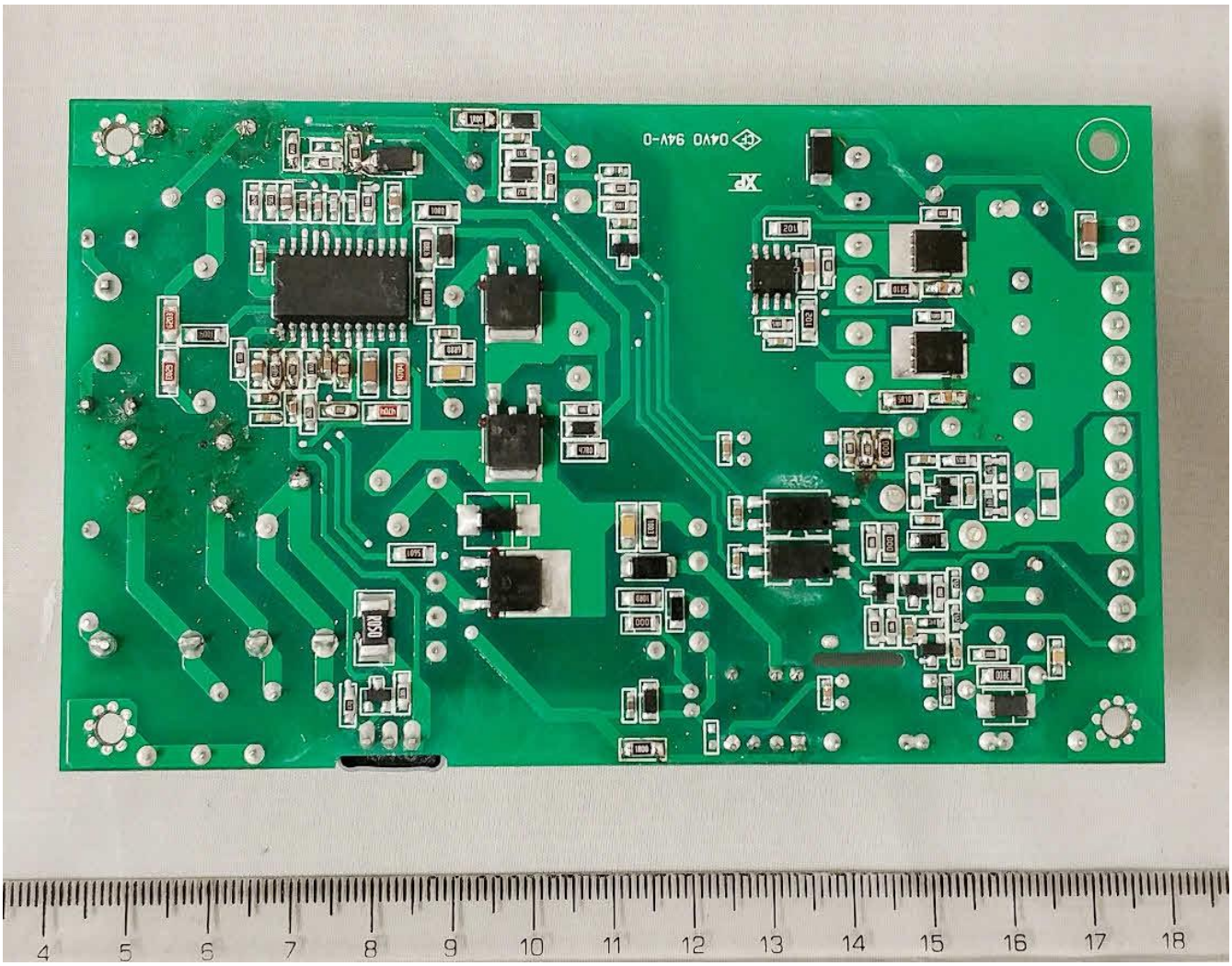
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承 認 書

CUSTOMER APPROVAL SPECIFICATION

CUSTOMER：阿貝思科技股份有限公司

客戶料號 ：05103000014(X25BCTR01F)

品　　名: TRANSFORMER

規　　格: LP2920H(12P) 850uH±10%

料　　號: 11026-201H403110

版　　本: V1.0

阿貝思科技股份有限公司 承認章

Prepared by	Approved by	Authorized by	Date
阿貝思科技 2016.02.18 施潔歆	阿貝思科技 2016.02.18 黃祥儀 / 阿貝思科技 2016.02.18 林熙發	阿貝思科技 2016.02.19 張銀世	2016/02/03

凌 鈦 科 技 有 限 公 司

LINK-TIME TECHNOLOGIES CORP.

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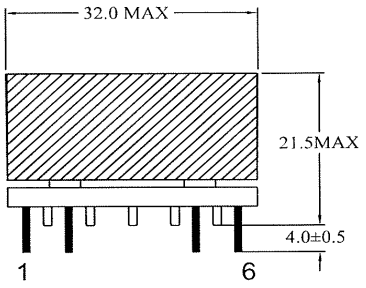
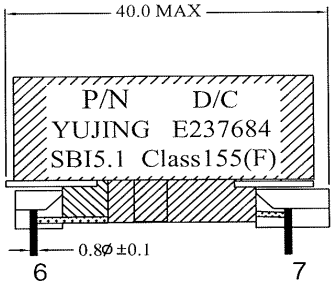
YUJING

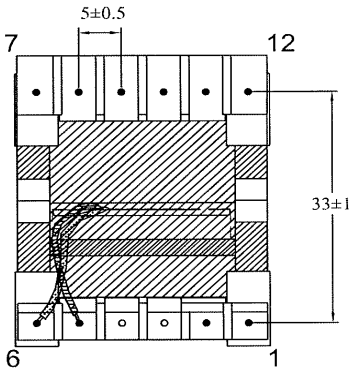
SPECIFICATION

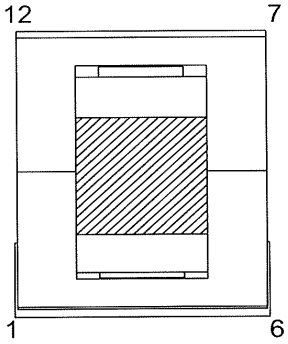
CUSTOMER	凌 鈺	PART NO.		DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H403110	DATE	2016-02-02	REV.	1.0	SHEET	2 OF 4

1.MACHENIC DIMENSION (UNIT:mm)

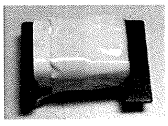




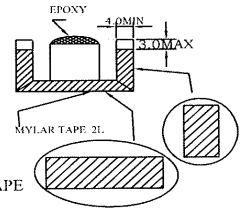




NOTE:
1.PIN3,4 CUT OFF.
2. 初級側與次級側CORE需用雙層18mm TAPE加工,
(TAPE需內折4mm MIN).
3.CORE需GAP且中柱點膠.
4.錫點勿超出BOBBIN支點.
5.次級端包22mm W的雙層TAPE 1Ts,再組裝CORE.(如圖1)
6.初次級側BOBBIN加裝護套后再組裝鐵芯.
7.CORE外包3Ts MYLAR TAPE.
8.成品需含浸.
9. N3進出線時需從線包側邊垂直拉出,不要在中
央出線(如圖所示),腹部會超高1mm REF.



(圖1)



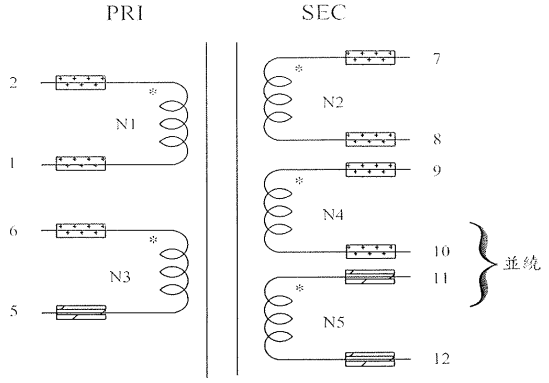
MYLAR TAPE
SOLDER

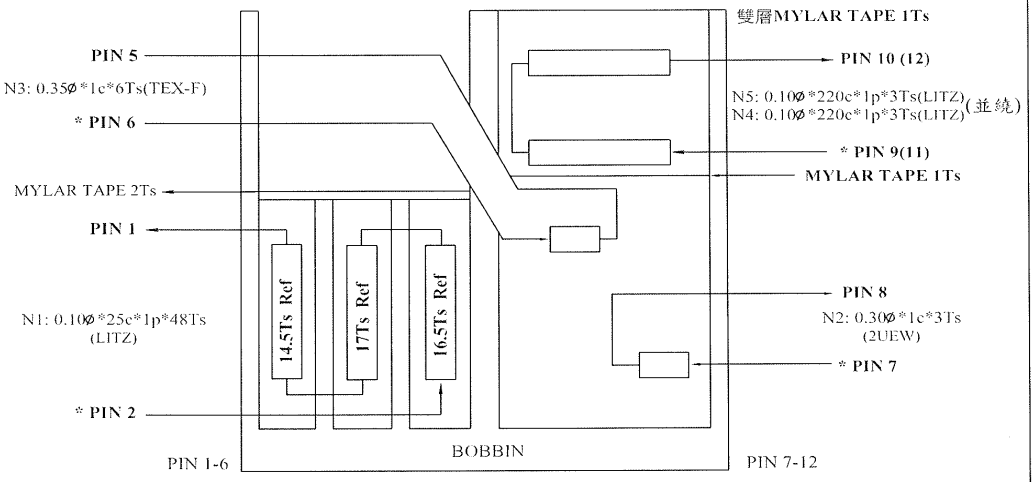
YUJING

SPECIFICATION

CUSTOMER	凌 欽	PART NO.		DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H403110	DATE	2016-02-02	REV.	1.0	SHEET	3 OF 4

2.WINDING ORDER





NOTE:

1. 初級側BOBBIN PIN朝向機台內繞製,次級側BOBBIN PIN朝向機台外繞製.
2. 出入線須加套管,N5統組及PIN5加黑色套管,其余加透明套管.
3. N2繞於次級靠PIN端密繞;N3用三層絕緣線繞制,於次級BOBBIN靠初級端密繞,進出線用一片5mm TAPE固定於次級,待線包組合後拉回初級接PIN.
4. N4,N5為雙組並統密繞. N4由PIN9進PIN10出,N5由PIN11進PIN12出.
5. 次級BOBBIN PIN端包22mm W的雙層TAPE 1Ts,再組裝初次級COVER.

黑色套管

透明套管

YUJING

SPECIFICATION

CUSTOMER	凌 扶	PART NO.		DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H403110	DATE	2016-02-02	REV.	1.0	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4277A ZENTECH : WK5235 , 502A , F = 100KHz V =1.0V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
L1	2	1	0.10Ø*25c *1p(LITZ)	Y	48±0.5	850uH ± 10%	300 MAX
L2	7	8	0.30Ø*1p (2UEW)	Y	3±0.5		
L3	6	5	0.35Ø*1p (TEX-F)	Y	6±0.5		
L4	9	10	0.10Ø*220c*1p(LITZ)	Y	3±0.5		
L5	11	12	0.10Ø*220c*1p(LITZ)	Y	3±0.5		
LK	2	1	0.10Ø*25s *1p(2UEW)	Y	48±0.5	180 uH ± 10%	@SECONDARY PIN7,8,9,10,11,12 SHORT

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/5mA, PRIMARY TO SECONDARY
2.0KV/1SEC/AC/5mA, PRIMARY TO CORE
2.0KV/1SEC/AC/5mA, SECONDARY TO CORE

5.MATERIAL LIST Class F Insulation System:SBI5.1

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.	TEMP RATING
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
3	CORE	LP-29 3C94	FERROXCUBE		
		LP-29 MB4	JFE		
4	WIRE	UEY(MW28-C) SFBW(MW-79C)	JUNG SHING WIRE CO.,LTD	E174837	155°C
		UEY(MW28-C) FSW-NY(MW80-C)	FENG CHING METAL CORPORATION	E172395	155°C
		UEW-NY(MW28C) UEWF(MW80C)	PACIFIC ELBCTRIC WIRE &CABLE CO., LTD.	E84087	155°C
		UEWE(MW28C) UEWF-E(MW80C)	TAI-I ELECTRIC WIRE &CABLE CO., LTD.	E85640	155°C
5	TRIPLE INSULATION WIRE	TEX-F	FURUKAWA ELECTRIC CO.,LTD	E206440	155°C
		TIW-3X	TOTOKU ELECTRONIC CO., LTD.	E166483	155°C
6	WINDING TAPE	1350F-1	3M TAI WAN LTD.	E17385	130°C
7	TEFLON TUBE	TFL	GREAT HOLDING INDUSTRIAL CO.,LTD.	E156256	200°C
		CB-TT-L	CHANG YUAN ELECTRONIC(SHENZHEN) CO.,LTD.	E180908	200°C
8	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO., LTD.	E72979	130°C
9	ADHESIVE	3300ZH/3300A-1	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090	
10	INSULATION SYSTEMS	SBI5.1	YUJING TECHOLOGY CO,LTD.	E237684	155°C

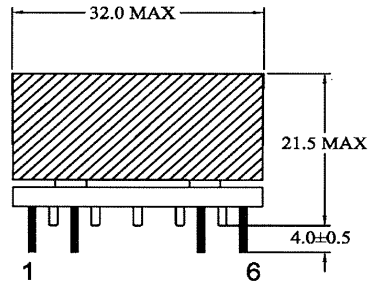
TR1-15V

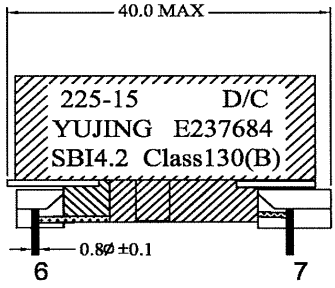
YUJING

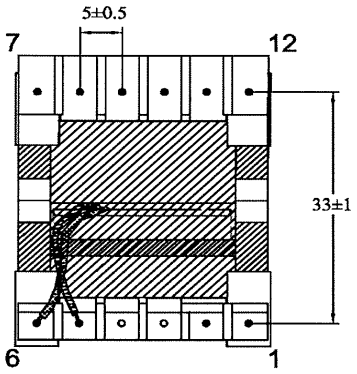
SPECIFICATION

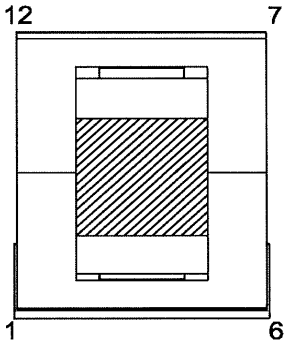
CUSTOMER	阿貝思	PART NO.	225-15	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H401814	DATE	2014-12-22	REV.	1.4	SHEET	2 OF 4

1.MACHENIC DIMENSION (UNIT:mm)



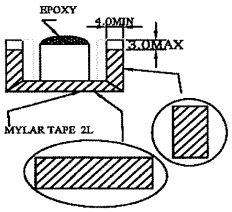






NOTE:
1. PIN3, 4 CUT OFF.
2. 初級側與次級側的CORE需用雙層18mm TAPE加工, (TAPE需內折4mm MIN).
3. CORE需GAP且中柱點膠.
4. 錫點勿超出BOBBIN支點.
5. 次級端包22mm W的雙層TAPE 1Ts,再組裝CORE.(如圖1)
6. 初次級側BOBBIN加裝護套后再組裝鐵芯.
7. CORE外包3Ts MYLAR TAPE.
8. 成品需含浸.
9. N3進出線時需從線包側邊垂直拉出,不要在中央出線(如圖所示),腹部會超高1mm REF.

(圖1)



SOLDER

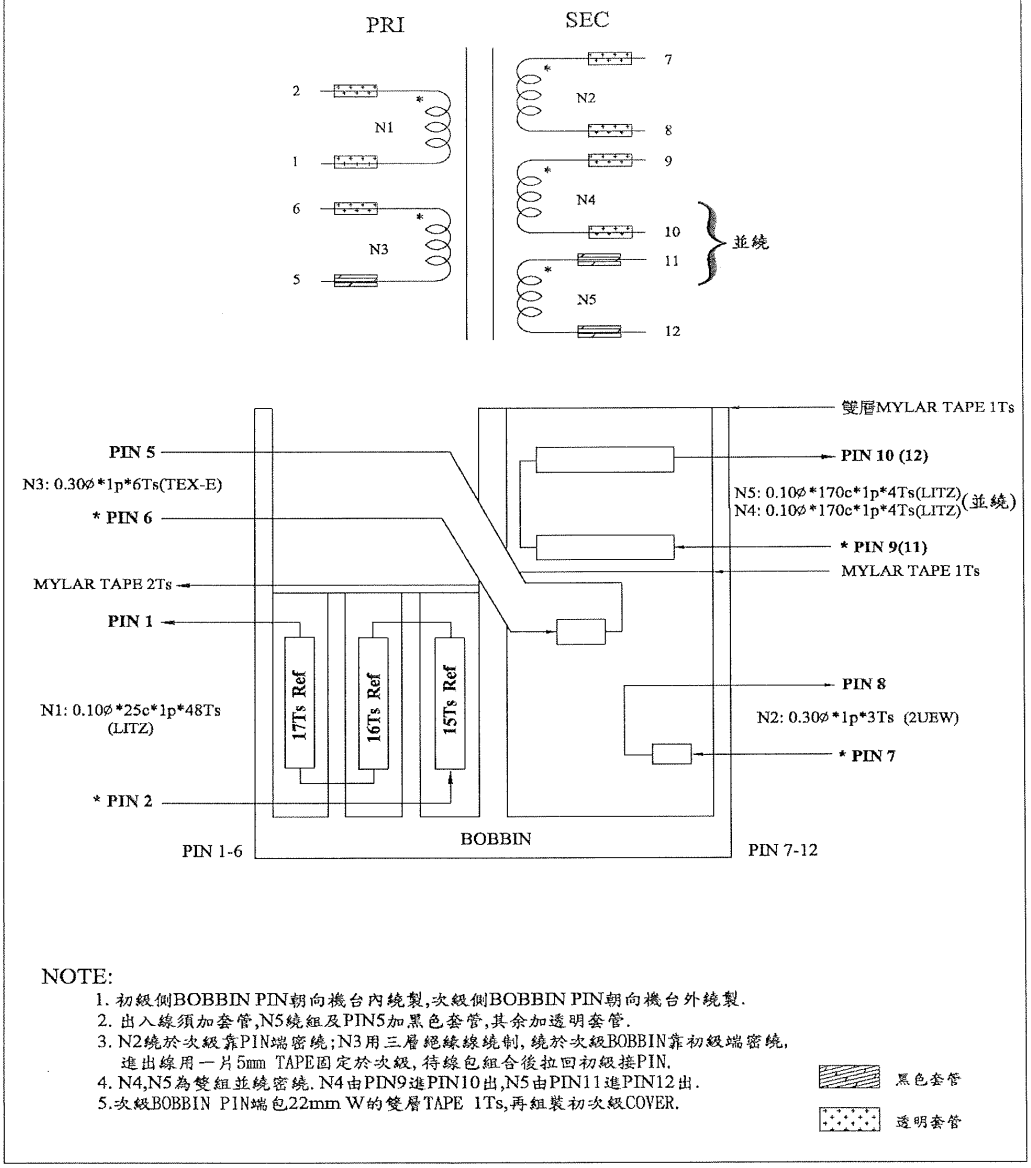
MYLAR TAPE

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-15	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H401814	DATE	2014-12-22	REV.	1.4	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

1. 初級側BOBBIN PIN朝向機台內繞製,次級側BOBBIN PIN朝向機台外繞製.
2. 出入線須加套管,N5繞組及PIN5加黑色套管,其余加透明套管.
3. N2繞於次級靠PIN端密繞;N3用三層絕緣線繞制,繞於次級BOBBIN靠初級端密繞,進出線用一片5mm TAPE固定於次級,待線包組合後拉回初級接PIN.
4. N4,N5為雙組並繞密繞. N4由PIN9進PIN10出,N5由PIN11進PIN12出.
5. 次級BOBBIN PIN端包22mm W的雙層TAPE 1Ts,再組裝初次級COVER.

黑色套管

透明套管

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-15	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H401814	DATE	2014-12-22	REV.	1.4	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4277A ZENTECH : WK5235 , 502A , F = 100KHz V =1.0V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
L1	2	1	0.10ø*25c *1p(LITZ)	Y	48±0.5	850uH ± 10%	300 MAX
L2	7	8	0.30ø*1p (2UEW)	Y	3±0.5		
L3	6	5	0.30ø*1p (TEX-E)	Y	6±0.5		
L4	9	10	0.10ø*170c*1p(LITZ)	Y	4±0.5		
L5	11	12	0.10ø*170c*1p(LITZ)	Y	4±0.5		
LK	2	1	0.10ø*25c *1p(2UEW)	Y	48±0.5	190 uH ± 10% @ SHORT SECONDARY	

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/5mA, PRIMARY TO SECONDARY
2.0KV/1SEC/AC/5mA, PRIMARY TO CORE
2.0KV/1SEC/AC/5mA, SECONDARY TO CORE

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

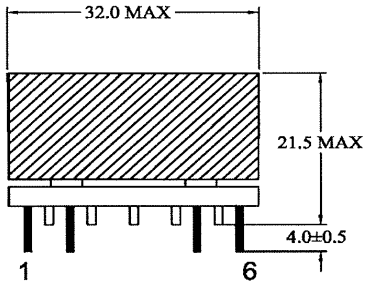
NO.	ITEM	MATERIAL	SUPPLIER	UL NO.	TEMP RATING
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
3	CORE	LP-29 3C94	FERROXCUBE		
		LP-29 MB4	JFE		
		LP-29 2HM5	NICERA		
4	WIRE	MW75C/UEW-4#	JUNG SHING WIRE CO.,LTD	E174837	130°C
		MW75/UEW	WA TAI ELECTROTECHNICAL MATELRIALS FACTORY LTD.	E243939	130°C
		MW75/UEW	FENG CHING METAL CORPORATION	E172395	130°C
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRIC CO.,LTD	E206440	130°C
		TIW-2X	TOTOKU ELECTRONIC CO., LTD.	E166483	130°C
6	WINDING TAPE	1350F-1	3M TAI WAN LTD.	E17385	130°C
7	TEFLON TUBE	TFL	GREAT HOLDING INDUSTRIAL CO.,LTD.	E156256	200°C
		CB-TT-L	CHANG YUAN ELECTRONIC(SHENZHEN) CO.,LTD.	E180908	200°C
8	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO., LTD.	E72979	130°C
9	ADHESIVE	3300ZH	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090	
10	INSULATION SYSTEMS	SBI4.2	YUJING TECHOLOGY CO., LTD.	E237684	130°C

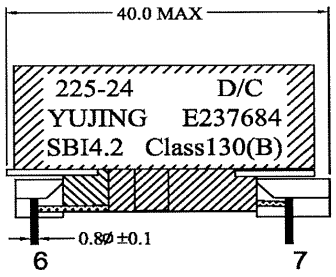
YUJING

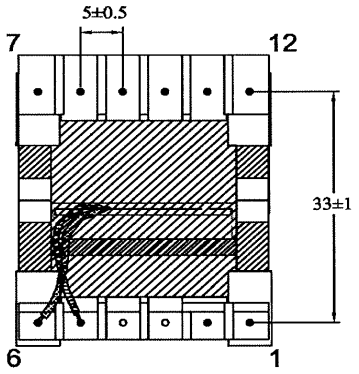
SPECIFICATION

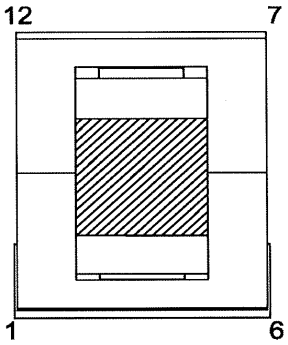
CUSTOMER	阿貝思	PART NO.	225-24	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H401914	DATE	2014-12-22	REV.	1.4	SHEET	2 OF 4

1.MACHENIC DIMENSION (UNIT:mm)

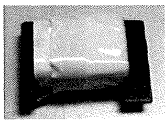




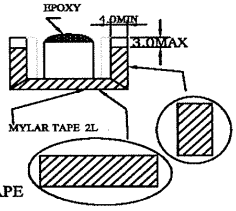




NOTE:
1. PIN3, 4 CUT OFF.
2. 初級側與次級側的CORE需用雙層18mm TAPE加工,
(TAPE需內折4mm MIN).
3.CORE需GAP且中柱點膠.
4.錫點勿超出BOBBIN支點.
5.次級端包22mm W的雙層TAPE 1Ts,再組裝CORE.(如圖1)
6.初次級側BOBBIN加裝護套后再組裝鐵芯.
7.CORE外包3Ts MYLAR TAPE.
8.成品需含浸.
9. N3進出線時需從線包側邊垂直拉出,不要在中
央出線(如圖所示),以免導致線包腹部超高.



(圖1)



SOLDER

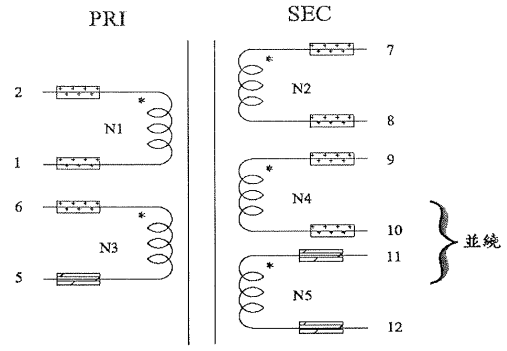
MYLAR TAPE

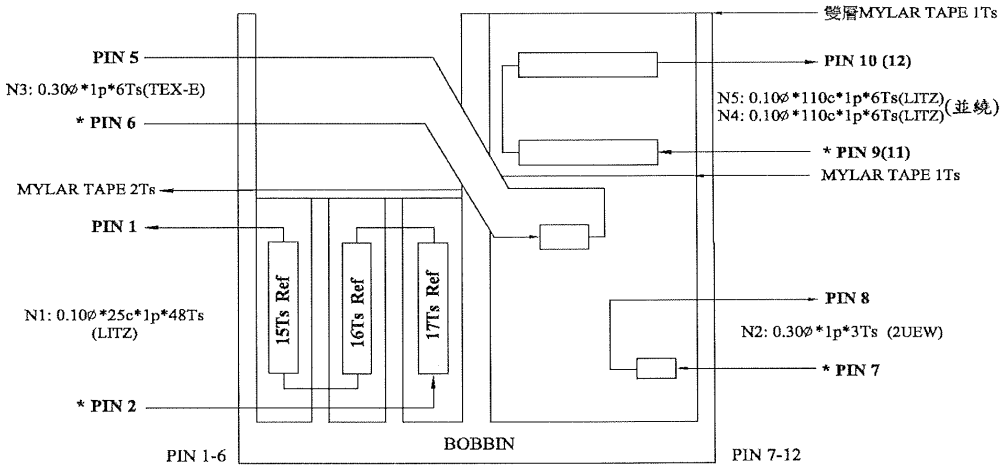
YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-24	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H401914	DATE	2014-12-22	REV.	1.4	SHEET	3 OF 4

2.WINDING ORDER





NOTE:

1. 初級側BOBBIN PIN朝向機台內繞製,次級側BOBBIN PIN朝向機台外繞製.
2. 出入線須加套管,N5繞組及PIN5加黑色套管,其余加透明套管.
3. N2繞於次級靠PIN端密繞;N3用三層絕緣線繞制,繞於次級BOBBIN靠初級端密繞,進出線用一片5mm TAPE固定於次級,待線包組合後拉回初級接PIN.
4. N4,N5為雙組並繞密繞. N4由PIN9進PIN10出,N5由PIN11進PIN12出.
5. 次級BOBBIN PIN端包22mm W的雙層TAPE 1Ts,再組裝初次級COVER.

黑色套管

透明套管

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-24	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H401914	DATE	2014-12-22	REV.	1.4	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4277A ZENTECH : WK5235 , 502A , F = 100KHz V =1.0V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
L1	2	1	0.10ø*25c *1p(LITZ)	Y	48±0.5	850uH ± 10%	300 MAX
L2	7	8	0.30ø*1p (2UEW)	Y	3±0.5		
L3	6	5	0.30ø*1p (TEX-E)	Y	6±0.5		
L4	9	10	0.10ø*110c*1p(LITZ)	Y	6±0.5		
L5	11	12	0.10ø*110c*1p(LITZ)	Y	6±0.5		
LK	2	1	0.10ø*25c *1p(2UEW)	Y	48±0.5	190 uH ± 10%	@ SHORT SECONDARY

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/5mA, PRIMARY TO SECONDARY
2.0KV/1SEC/AC/5mA, PRIMARY TO CORE
2.0KV/1SEC/AC/5mA, SECONDARY TO CORE

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

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.	TEMP RATING
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
3	CORE	LP-29 3C94	FERROXCUBE		
		LP-29 MB4	JFE		
		LP-29 2HM5	NICERA		
4	WIRE	MW75C/UEW-4#	JUNG SHING WIRE CO.,LTD	E174837	130°C
		MW75/UEW	WA TAI ELECTROTECHNICAL MATELRIALS FACTORY LTD.	E243939	130°C
		MW75/UEW	FENG CHING METAL CORPORATION	E172395	130°C
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRIC CO.,LTD	E206440	130°C
		TIW-2X	TOTOKU ELECTRONIC CO., LTD.	E166483	130°C
6	WINDING TAPE	1350F-1	3M TAI WAN LTD.	E17385	130°C
7	TEFLON TUBE	TFL	GREAT HOLDING INDUSTRIAL CO.,LTD.	E156256	200°C
		CB-TT-L	CHANG YUAN ELECTRONIC(SHENZHEN) CO.,LTD.	E180908	200°C
8	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO., LTD.	E72979	130°C
9	ADHESIVE	3300ZH/3300A-1	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090	
10	INSULATION SYSTEMS	SBI4.2	YUJING TECHOLOGY CO., LTD.	E237684	130°C

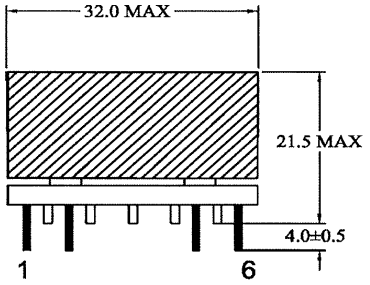
TR1-28V

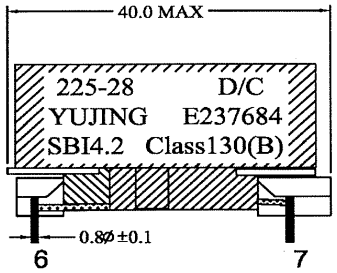
YUJING

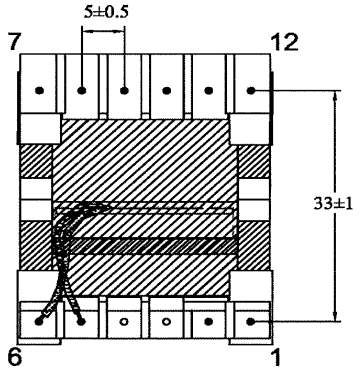
SPECIFICATION

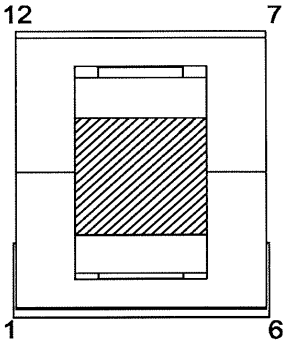
CUSTOMER	阿貝思	PART NO.	225-28	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402014	DATE	2014-12-22	REV.	1.4	SHEET	2 OF 4

1.MACHENIC DIMENSION (UNIT:mm)



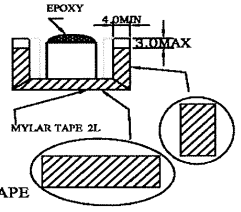






NOTE:
1. PIN3, 4 CUT OFF.
2. 初級側與次級側的CORE需用雙層18mm TAPE加工,
(TAPE需內折4mm MIN).
3.CORE需GAP且中柱點膠.
4.錫點勿超出BOBBIN支點.
5.次級端包22mm W的雙層TAPE 1Ts,再組裝CORE.(如圖1)
6.初次級側BOBBIN加裝護套后再組裝鐵芯.
7.CORE外包3Ts MYLAR TAPE.
8.成品需含浸.
9. N3進出線時需從線包側邊垂直拉出,不要在中央出線(如圖所示),以免導致線包腹部超高.

(圖1)



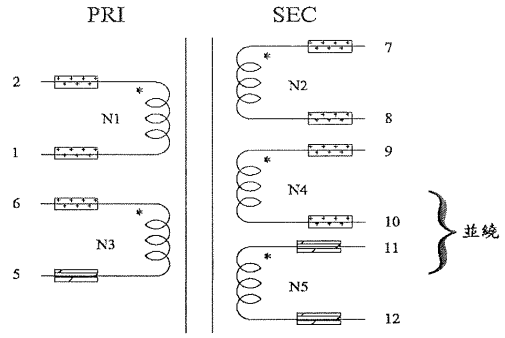
SOLDER
MYLAR TAPE

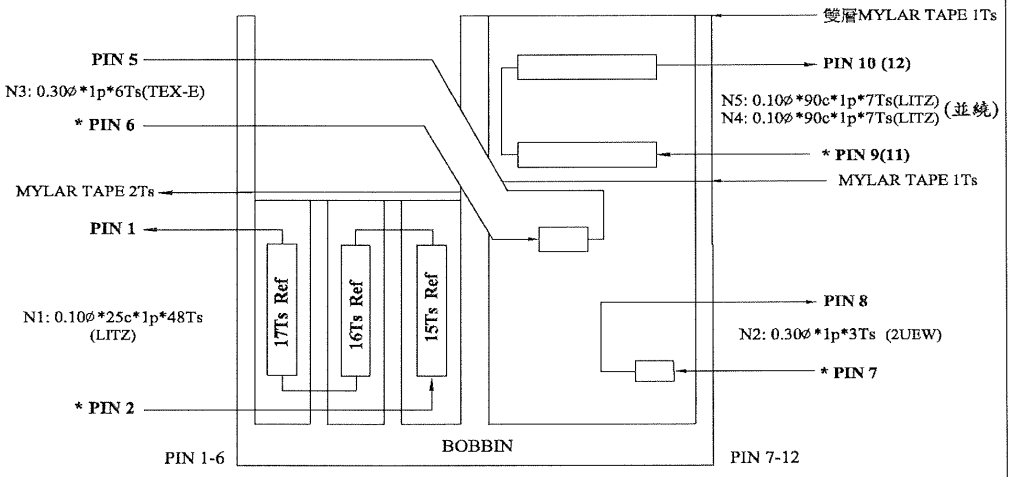
YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-28	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402014	DATE	2014-12-22	REV.	1.4	SHEET	3 OF 4

2.WINDING ORDER





NOTE:

1. 初級側BOBBIN PIN朝向機台內繞製,次級側BOBBIN PIN朝向機台外繞製.
2. 出入線須加套管,N5繞組及PIN5加黑色套管,其余加透明套管.
3. N2繞於次級靠PIN端密繞;N3用三層絕緣線繞制,繞於次級BOBBIN靠初級端密繞,
   連出線用一片5mm TAPE固定於次級,待線包組合後拉回初級接PIN.
4. N4,N5為雙組並繞密繞. N4由PIN9進PIN10出,N5由PIN11進PIN12出.
5. 次級BOBBIN PIN端包22mm W的雙層TAPE 1Ts,再組裝初次級COVER.

黑色套管

透明套管

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-28	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402014	DATE	2014-12-22	REV.	1.4	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4277A ZENTECH : WK5235 , 502A , F = 100KHz V =1.0V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
L1	2	1	0.10Ø*25c *1p(LITZ)	Y	48±0.5	850uH ± 10%	300 MAX
L2	7	8	0.30Ø*1p (2UEW)	Y	3±0.5		
L3	6	5	0.30Ø*1p (TEX-E)	Y	6±0.5		
L4	9	10	0.10Ø*90c*1p(LITZ)	Y	7±0.5		
L5	11	12	0.10Ø*90c*1p(LITZ)	Y	7±0.5		
LK	2	1	0.10Ø*25c *1p(2UEW)	Y	48±0.5	190 uH ± 10%	@ SHORT SECONDARY

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/5mA, PRIMARY TO SECONDARY
2.0KV/1SEC/AC/5mA, PRIMARY TO CORE
2.0KV/1SEC/AC/5mA, SECONDARY TO CORE

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

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.	TEMP RATING
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
3	CORE	LP-29 3C94	FERROXCUBE		
		LP-29 MB4	JFE		
		LP-29 2HM5	NICERA		
4	WIRE	MW75C/UEW-4#	JUNG SHING WIRE CO.,LTD	E174837	130°C
		MW75/UEW	WA TAI ELECTROTECHNICAL MATELRIALS FACTORY LTD.	E243939	130°C
		MW75/UEW	FENG CHING METAL CORPORATION	E172395	130°C
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRIC CO.,LTD	E206440	130°C
		TIW-2X	TOTOKU ELECTRONIC CO., LTD.	E166483	130°C
6	WINDING TAPE	1350F-1	3M TAI WAN LTD.	E17385	130°C
7	TEFLON TUBE	TFL	GREAT HOLDING INDUSTRIAL CO.,LTD.	E156256	200°C
		CB-TT-L	CHANG YUAN ELECTRONIC(SHENZHEN) CO.,LTD.	E180908	200°C
8	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO., LTD.	E72979	130°C
9	ADHESIVE	3300ZH/3300A-1	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090	
10	INSULATION SYSTEMS	SBI4.2	YUJING TECHOLOGY CO., LTD.	E237684	130°C

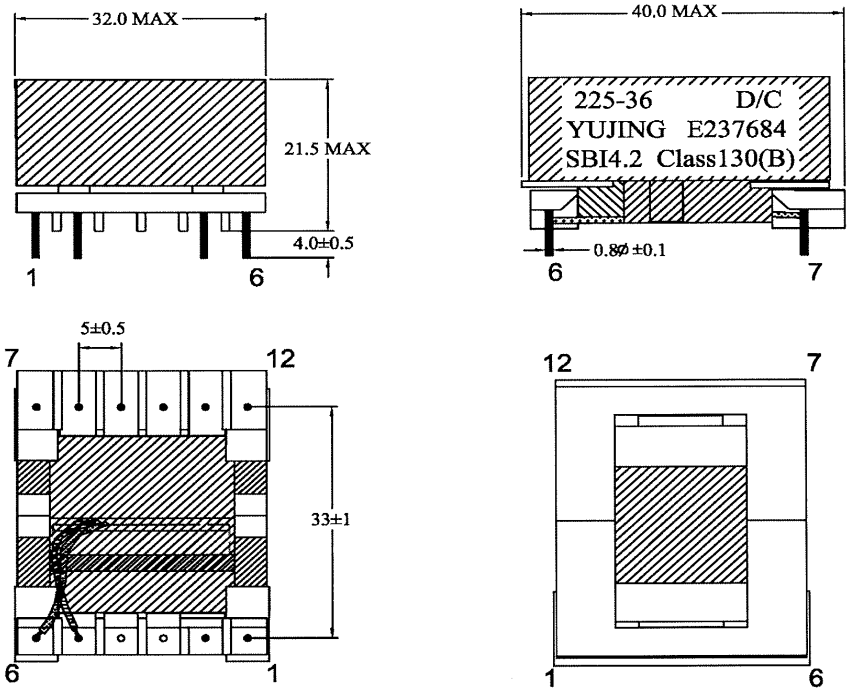
TRI-36V

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-36	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402211	DATE	2014-12-22	REV.	1.1	SHEET	2 OF 4

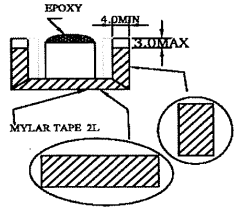
1.MACHENIC DIMENSION (UNIT:mm)



NOTE:

1. PIN3, 4 CUT OFF.
2. 初級側與次級側的CORE需用雙層18mm TAPE加工, (TAPE需內折4mm MIN).
3. CORE需GAP且中柱點膠.
4. 錫點勿超出BOBBIN支點.
5. 次級端包22mm W的雙層TAPE 1Ts,再組裝CORE.(如圖1)
6. 初次級側BOBBIN加裝護套后再組裝鐵芯.
7. CORE外包3Ts MYLAR TAPE.
8. 成品需含浸.
9. N3進出線時需從線包側邊垂直拉出, 不要在中央出線(如圖所示), 以免導致線包腹部超高.

(圖1)



SOLDER

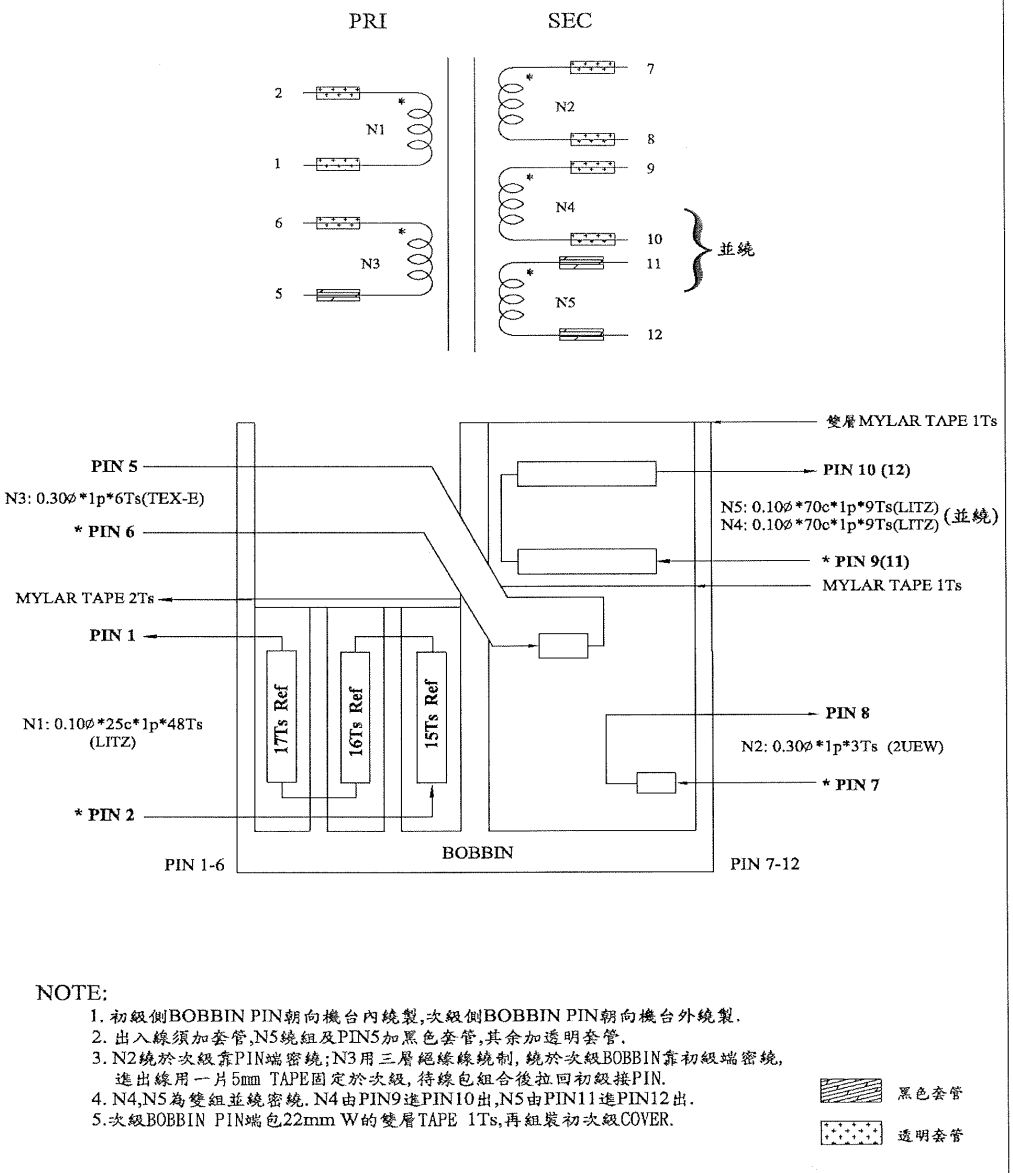
MYLAR TAPE

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-36	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402211	DATE	2014-12-22	REV.	1.1	SHEET	3 OF 4

2.WINDING ORDER



NOTE:

1. 初級側BOBBIN PIN朝向機台內繞製,次級側BOBBIN PIN朝向機台外繞製.
2. 出入線須加套管,N5繞組及PIN5加黑色套管,其余加透明套管.
3. N2繞於次級靠PIN端密繞;N3用三層絕緣線繞制,繞於次級BOBBIN靠初級端密繞,
   進出線用一片5mm TAPE固定於次級,待線包組合後拉回初級接PIN.
4. N4,N5為雙組並繞密繞. N4由PIN9連PIN10出,N5由PIN11連PIN12出.
5. 次級BOBBIN PIN端包22mm W的雙層TAPE 1Ts,再組裝初次級COVER.

黑色套管

透明套管

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-36	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402211	DATE	2014-12-22	REV.	1.1	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4277A ZENTECH : WK5235 , 502A , F = 100KHz V =1.0V AT 25°C

NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
L1	2	1	0.10Ø*25c *1p(LITZ)	Y	48±0.5	850uH ± 10%	300 MAX
L2	7	8	0.30Ø*1p (2UEW)	Y	3±0.5		
L3	6	5	0.30Ø*1p (TEX-E)	Y	6±0.5		
L4	9	10	0.10Ø*70c*1p(LITZ)	Y	9±0.5		
L5	11	12	0.10Ø*70c*1p(LITZ)	Y	9±0.5		
LK	2	1	0.10Ø*25c *1p(2UEW)	Y	48±0.5	190 uH ± 10% @ SHORT SECONDARY	

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/5mA, PRIMARY TO SECONDARY
2.0KV/1SEC/AC/5mA, PRIMARY TO CORE
2.0KV/1SEC/AC/5mA, SECONDARY TO CORE

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

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.	TEMP RATING
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
3	CORE	LP-29 3C94	FERROXCUBE		
		LP-29 MB4	JFE		
		LP-29 2HM5	NICERA		
4	WIRE	MW75C/UEW-4#	JUNG SHING WIRE CO.,LTD	E174837	130°C
		MW75/UEW	WA TAI ELECTROTECHNICAL MATELRIALS FACTORY LTD.	E243939	130°C
		MW75/UEW	FENG CHING METAL CORPORATION	E172395	130°C
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRIC CO.,LTD	E206440	130°C
		TIW-2X	TOTOKU ELECTRONIC CO., LTD.	E166483	130°C
6	WINDING TAPE	1350F-1	3M TAI WAN LTD.	E17385	130°C
7	TEFLON TUBE	TFL	GREAT HOLDING INDUSTRIAL CO.,LTD.	E156256	200°C
		CB-TT-L	CHANG YUAN ELECTRONIC(SHENZHEN) CO.,LTD.	E180908	200°C
8	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO., LTD.	E72979	130°C
9	ADHESIVE	3300/3300A-1	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090	
10	INSULATION SYSTEMS	SBI4.2	YUJING TECHOLOGY CO., LTD.	E237684	130°C

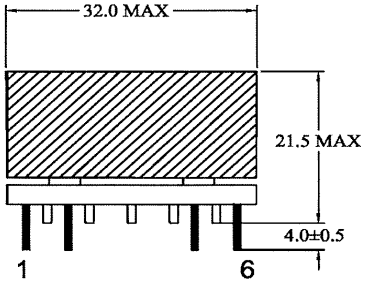
TR1-48V

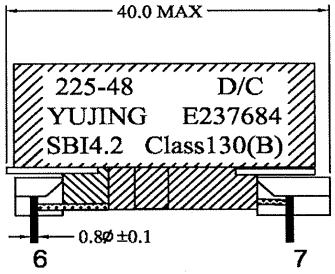
YUJING

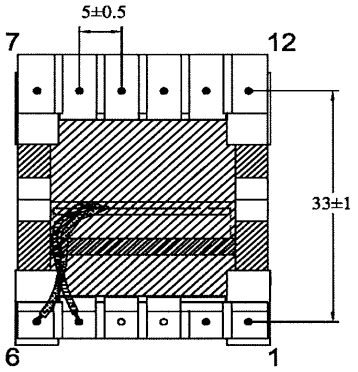
SPECIFICATION

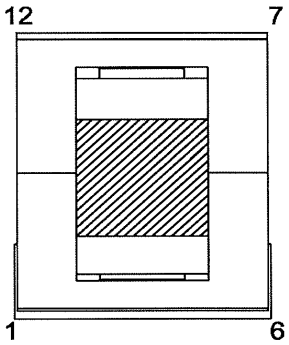
CUSTOMER	阿貝思	PART NO.	225-48	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402114	DATE	2014-12-22	REV.	1.4	SHEET	2 OF 4

1.MACHENIC DIMENSION (UNIT:mm)



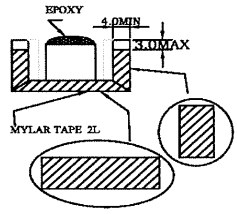






NOTE:
1. PIN3, 4 CUT OFF.
2. 初級側與次級側的CORE需用雙層18mm TAPE加工, (TAPE需內折4mm MIN).
3.CORE需GAP且中柱點膠.
4.錫點勿超出BOBBIN支點.
5.次級端包22mm W的雙層TAPE 1Ts,再組裝CORE.(如圖1)
6.初次級側BOBBIN加裝護套后再組裝鐵芯.
7.CORE外包3Ts MYLAR TAPE.
8.成品需含浸.
9. N3進出線時需從線包側邊垂直拉出,不要在中央出線(如圖所示),以免導致線包腹部超高.

(圖1)



SOLDER

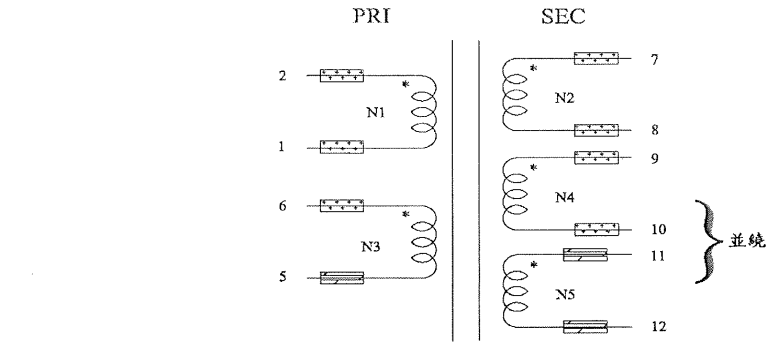
MYLAR TAPE

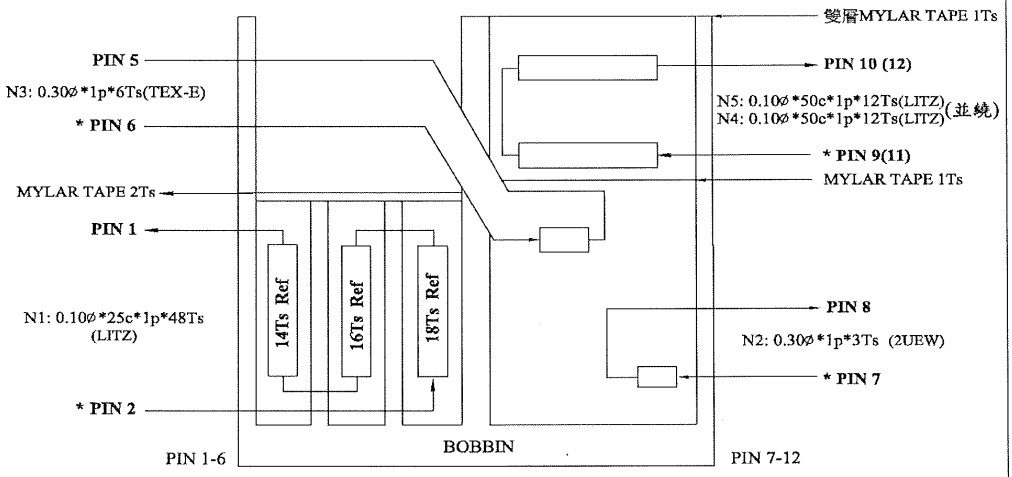
YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-48	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402114	DATE	2014-12-22	REV.	1.4	SHEET	3 OF 4

2.WINDING ORDER





NOTE:

1. 初級側BOBBIN PIN朝向機台內繞製,次級側BOBBIN PIN朝向機台外繞製.
2. 出入線須加套管,N5繞組及PIN5加黑色套管,其余加透明套管.
3. N2繞於次級靠PIN端密繞;N3用三層絕緣線繞制,繞於次級BOBBIN靠初級端密繞,
   進出線用一片5mm TAPE固定於次級,待線包組合後拉回初級接PIN.
4. N4,N5為雙組並繞密繞. N4由PIN9進PIN10出,N5由PIN11進PIN12出.
5. 次級BOBBIN PIN端包22mm W的雙層TAPE 1Ts,再組裝初次級COVER.

黑色套管

透明套管

YUJING

SPECIFICATION

CUSTOMER	阿貝思	PART NO.	225-48	DESCRIPTION		LP-2920H (12P)	
MODEL NO.	11026-201H402114	DATE	2014-12-22	REV.	1.4	SHEET	4 OF 4

3.ELECTRICAL SPECIFICATION

HP: 4277A ZENTECH : WK5235 , 502A , F = 100KHz V =1.0V AT 25°C

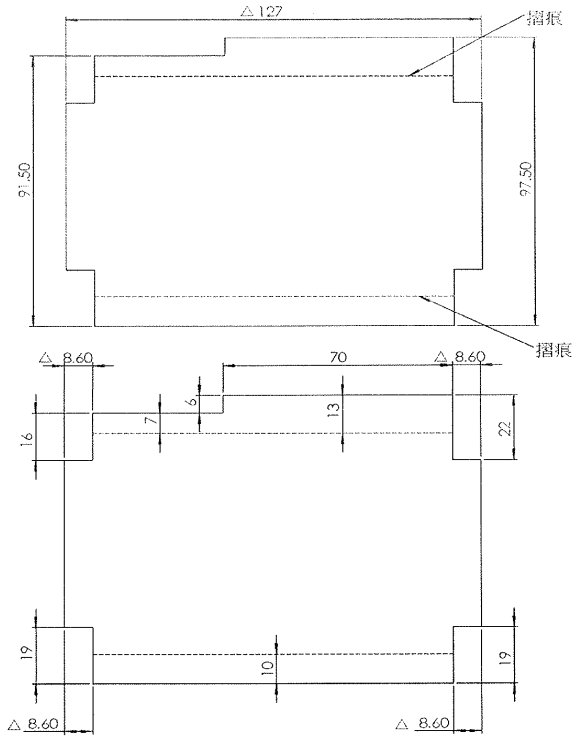
NO.	START	FINISH	WIRE	COLOR	TURNS	INDUCTANCE	DCR (mΩ)
L1	2	1	0.10Ø*25c *1p(LITZ)	Y	48±0.5	850uH ± 10%	300 MAX
L2	7	8	0.30Ø*1p (2UEW)	Y	3±0.5		
L3	6	5	0.30Ø*1p (TEX-E)	Y	6±0.5		
L4	9	10	0.10Ø*50c*1p(LITZ)	Y	12±0.5		
L5	11	12	0.10Ø*50c*1p(LITZ)	Y	12±0.5		
LK	2	1	0.10Ø*25c *1p(2UEW)	Y	48±0.5	190 uH ± 10%	@ SHORT SECONDARY

4.DIELECTRIC STRENGTH

WITHSTANDING VOLTAGE: 4.0KV/1SEC/AC/5mA, PRIMARY TO SECONDARY
2.0KV/1SEC/AC/5mA, PRIMARY TO CORE
2.0KV/1SEC/AC/5mA, SECONDARY TO CORE

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

NO.	ITEM	MATERIAL	SUPPLIER	UL NO.	TEMP RATING
1	BOBBIN	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
2	COVER	PM-9820	SUMITOMO BAKELITE CO., LTD.	E41429	150°C
		PM-9630	SUMITOMO BAKELITE CO., LTD.	E41429(M)	150°C
3	CORE	LP-29 3C94	FERROXCUBE		
		LP-29 MB4	JFE		
		LP-29 2HM5	NICERA		
4	WIRE	MW75C/UEW-4#	JUNG SHING WIRE CO.,LTD	E174837	130°C
		MW75/UEW	WA TAI ELECTROTECHNICAL MATELRIALS FACTORY LTD.	E243939	130°C
		MW75/UEW	FENG CHING METAL CORPORATION	E172395	130°C
5	TRIPLE INSULATION WIRE	TEX-E	FURUKAWA ELECTRIC CO.,LTD	E206440	130°C
		TIW-2X	TOTOKU ELECTRONIC CO., LTD.	E166483	130°C
6	WINDING TAPE	1350F-1	3M TAI WAN LTD.	E17385	130°C
7	TEFLON TUBE	TFL	GREAT HOLDING INDUSTRIAL CO.,LTD.	E156256	200°C
		CB-TT-L	CHANG YUAN ELECTRONIC(SHENZHEN) CO.,LTD.	E180908	200°C
8	VARNISH	WP-2952F-2G	HITACHI CHEMICAL CO., LTD.	E72979	130°C
9	ADHESIVE	3300ZH/3300A-1	EATTO ELECTRONIC MATERIAL CO., LTD.	E218090	
10	INSULATION SYSTEMS	SBI4.2	YUJING TECHOLOGY CO., LTD.	E237684	130°C



THICKNESS:0.43mm±0.03mm
SIZE TOLERANCE:±0.5mm
UNIT：mm

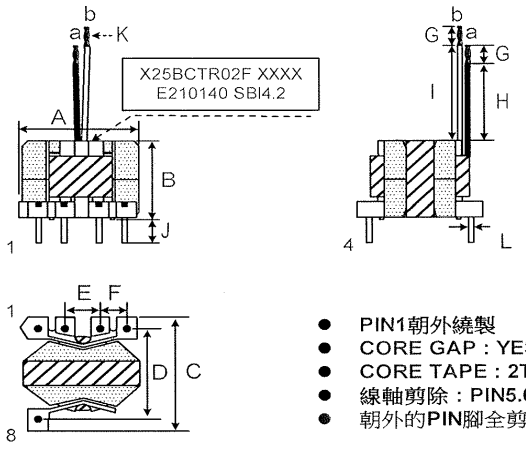
PURCHASER	阿貝思科技股份有限公司	APPROVAL SOURCE	ITW ELCTRONIC COMPONENTS/PRODUCTS(SHANGHAI)CO.,LTD		
MATERIAL	FORMEX GK17	VENDOR AGENT	巨崇企業有限公司		
PART ON.	07503000001	PART NAME	size 127mm*97.5mm		
FINISH	黑色	DRAWN BY		DATE	2016/8/29
APPVD. BY		SCALE		SHEET	
DATE		REV.			

RoHS OK

SPECIFICATION FOR APPROVAL

CUSTOMER	阿 貝 思	DESCRIPTION	RM-6	CUSTOMER'S PART NO	X25BCTR02F

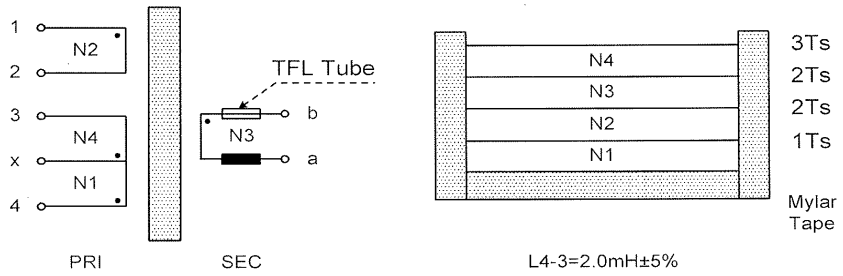
1. MECHANICAL ASSEMBLY



- PIN1朝外繞製
- CORE GAP : YES
- CORE TAPE : 2Ts
- 線軸剪除 : PIN5.6.7
- 朝外的PIN腳全剪除

A	19.0 MAX m/m
B	15.0 MAX m/m
C	19.5 MAX m/m
D	15.2±0.5 m/m
E	5.08±0.5 m/m
F	3.81±0.5 m/m
G	5.0±1.0 m/m
H	25.0±1.5 m/m
I	30.0±1.5 m/m
J	4.0±0.5 m/m
K	Φ1.0 MAX m/m
L	Φ0.6±0.1 m/m
M	m/m

2. SCHEMATIC



NOTICE :

- N1.N2.N4理線位置是在朝下的PIN腳上.
- N1.N4 x線剪斷預留在一次側頂部,待N4繞完後先包1圈膠帶,加TFL套管折回線包內後包2圈膠帶.
- N3飛線於二次側頂部出線,a.b線平線軸量起,a線總長30mm錫5mm,b線總長35mm錫5mm.a加套黑色TFL套管,b加套透明TFL套管.

APPROVED	CHECKED	PREPARED	SAP NO.	DATE	REV	PAGE
工程部 05. MAY. 16 詹益銘	工程部 05. MAY. 16 羅月琴	工程部 05. MAY. 16 劉懿瑩	16012205-0	05-MAY-16	1. 0	1/2

安星企業股份有限公司
AIN HSIN ELECTRONICS CO., LTD.

RoHS OK

SPECIFICATION FOR APPROVAL

CUSTOMER	阿 貝 思	DESCRIPTION	RM-6	CUSTOMER'S PART NO	X25BCTR02F

3. WINDING DATA :

WDG	WIRE / MATL	TURNS	ST	FIN	INDUCTANCE	DCR MAX	SLEEVE	REMARK
N1	Φ0.28*1	36	4	x	-	-	NO	
N2	Φ0.30*1	13	1	2	66.0uH±10%	115mΩ	NO	
N3	Φ0.25*3 TEX-E	4	b	a	6.2uH ref	35mΩ	YES	
N4	Φ0.28*1	36	x	3	-	-	NO	

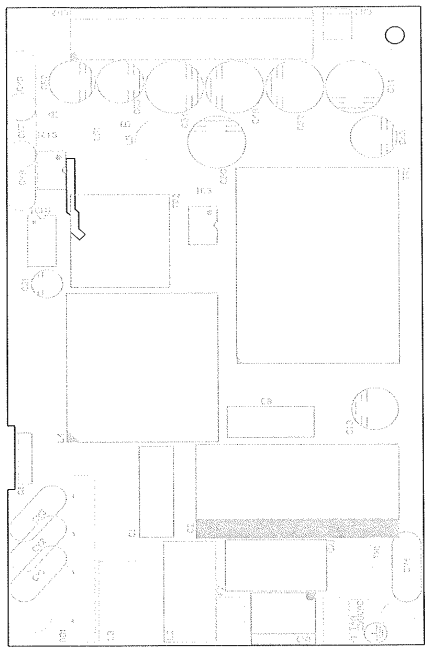
(1) TEST CONDITION : L4-3=2.0mH±5% , DCR=765mΩ MAX 100KHZ/1V (HP-4284A)
(2) TEMPERATURE RANGE : - 25℃ ~ 130℃
(3) BREAKDOWN VOLTAGE :
AC 4.0KV 5mA HI-POT FOR 3 SECONDS BETWEEN PRIMARY TO SECONDARY
AC 0.6KV 5mA HI-POT FOR 3 SECONDS BETWEEN PRIMARY TO CORE.
AC 4.0KV 5mA HI-POT FOR 3 SECONDS BETWEEN SECONDARY TO CORE.
(4) INSULATING RESISTANCE :
THE INSULATING RESISTANCE BETWEEN WINDING AND WINDING TO CORE MEASURED BY DC 500V INSULATING RESISTANCE METER SHOULD BE OVER 100MΩ.

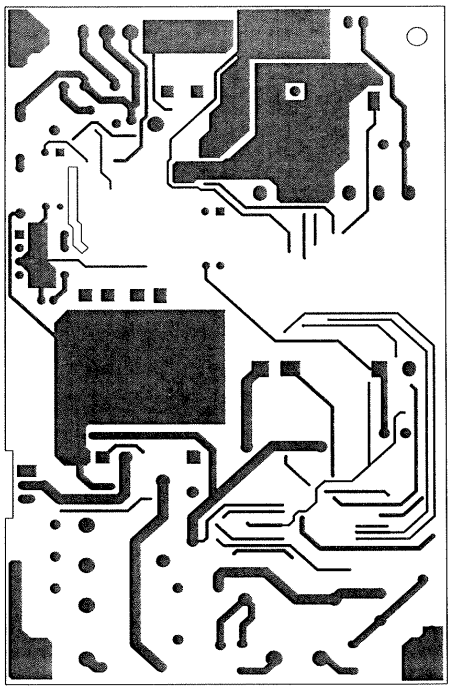
4. MATERIAL LIST:

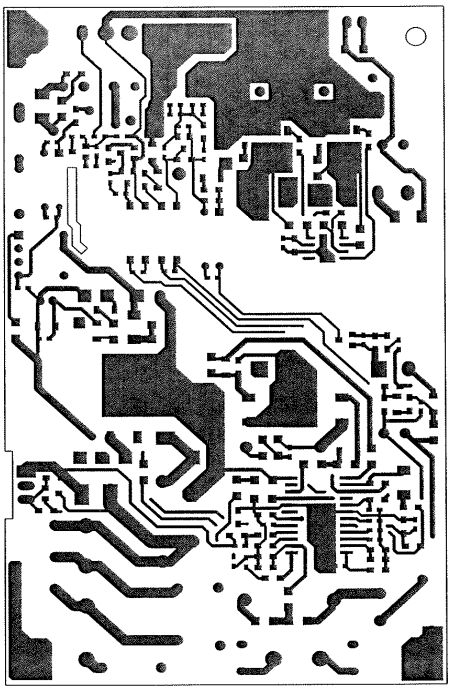
ITEM	MATERIAL	VENDOR	NO	CLASS
CORE	P4,6H20,3C90, MZ4,MB3,NC-2H	ACME,FDK,FERROXCUBE, ALLITON,KAWATETSU,NICERA		
BOBBIN	PET FR530	E I DUPONT DE NEMOURS & CO INC	E41938	V-0
	PHENOLIC PM-9630	SUMITOMO BAKELITE CO.,LTD.	E41429	V-0
WIRE	MW 75or 130C Polyurethane	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	E201757	B
	TEX-E	FURUKAWA	E206440	B
TAPE	POLYESTER TAPE 1350F-1,CT	3M,YAHUA	E17385,E165111	B
TUBE	TFL	GREAT HOLDING	E156256	H^+
VARNISH	V1630FS	ELANTAS ZHUHAI CO LTD	E314793	H
	BC-359	JOHN C DOLPH CO.	E317427	H
INSULATION SYSTEMS	SBI4.2 (AUTHORIZE E210140)	SUMITOMO BAKELITE CO.,LTD.	E209189	B

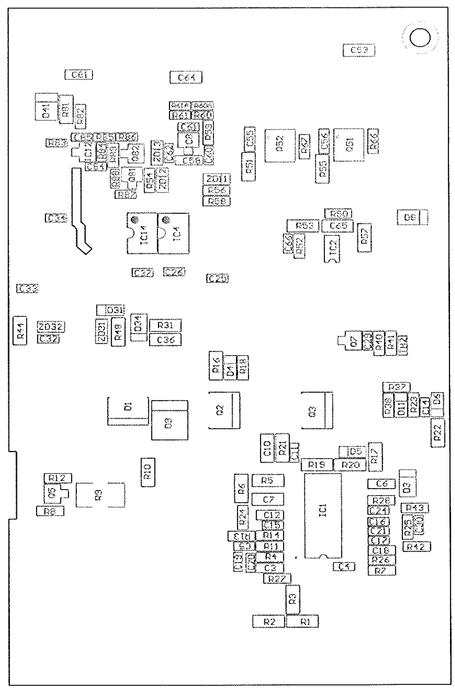
APPROVED	CHECKED	PREPARED	SAP NO.	DATE	REV	PAGE
工程部 05. MAY. 16 詹益銘	工程部 05. MAY. 16 羅月琴	工程部 05. MAY. 16 劉懿瑩	16012205-0	05-MAY-16	1.0	2/2

安星企業股份有限公司
AIN HSIN ELECTRONICS CO., LTD.









THE XPERTS IN POWER

XP Power LLC, 15641 Red Hill Ave, Ste 100, Tustin, CA 92780 USA
Tel: (714) 597-7100 Fax: (714) 597-7143 Website: www.xppower.com

UL LLC
47173 Benicia St.
Fremont, CA 94538-7366

Attn: UL Representative

Subject: National Differences

Dear Sir,

This document confirms that XP Power LLC will provide the following items needed to the accepting NCB along with the CB test report.

Markings and Safety Instructions - Safety instructions and markings in the language suitable for countries listed in the attached report will be provided at the time the CB test report is submitted to the accepting NCB.

EMC Test Report – Where detailed in the National Differences, an EMC Test report or Declaration of Conformity will accompany this product when sent to countries that require EMC test results as part of their certification process e.g. Korea.

We confirm that:

Power Supply Cords and Plugs - All power cords and plug assemblies provided with the unit will be certified and suitable for use in the countries listed in the attached CB test report.

Manufacturer Declaration
XP Power LLC declares that the sample submitted for evaluation is representative of the products from each factory noted in the CB Report.

ROHS Directive – We have been advised that we will need to provide evidence that our product complies with ROHS Directive 2011/65/EU. The accepting NCB may obtain this information from XP Power LLC by part number upon request.

Tac Pham
International Regulatory Compliance Manager
XP Power LLC

Enclosure - Miscellaneous for de-rating curve

Convectional cooling

Model Name	Tma = 50°C		Tma = 70°C		Tma = 85°C	
	V (V)	I (A)	V (V)	I (A)	V (V)	I (A)
UCP225PS12	12	12.5	12	6.25	12	3.125
UCP225PS15	15	10	15	5	15	2.5
UCP225PS18	18	8.33	18	4.165	18	2.08
UCP225PS24	24	6.25	24	3.125	24	1.56
UCP225PS28	28	5.36	28	2.68	28	1.34
UCP225PS36	36	4.16	36	2.08	36	1.04
UCP225PS48	48	3.1	48	1.55	48	0.775

Model Name	Tma = 50°C		Tma = 70°C		Tma = 85°C	
	V (V)	I (A)	V (V)	I (A)	V (V)	I (A)
UCP225PS12	12	18.75	12	9.38	12	7.5
UCP225PS15	15	15	15	7.5	15	6
UCP225PS18	18	12.5	18	6.25	18	5
UCP225PS24	24	9.38	24	4.69	24	3.75
UCP225PS28	28	8.04	28	4.02	28	3.21
UCP225PS36	36	6.25	36	3.125	36	2.5
UCP225PS48	48	4.69	48	2.345	48	1.87

Test Record No. 1

The manufacturer submitted representative production samples of Models UCP225PS12, UCP225PS15, UCP225PS18, UCP225PS24, UCP225PS28, UCP225PS36 and UCP225PS48.

The following tests were conducted:

Test	Testing Location/Comments
Guide Information Page - Maximum Output Voltage, Current, and Volt Ampere Measurement (1.2.2.1)	
Input: Single-Phase (1.6.2)	
Durability of Marking (1.7.11)	
Energy Hazard Measurements (2.1.1.5, 2.1.2, 1.2.8.10)	
Capacitance Discharge (2.1.1.7)	
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	
Humidity (2.9.1, 2.9.2, 5.2.2)	
Determination of Working Voltage; Working Voltage Measurement (2.10.2)	
Thin Sheet Material (2.10.5.9, 2.10.5.10, 2.10.5.6)	
Transformer and Wire /Insulation Electric Strength (2.10.5.13)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Ball Pressure (4.5.5, 4.5)	
Touch Current (Single-Phase; TN/TT System) (5.1, Annex D)	
Electric Strength (5.2.2)	
Component Failure (5.3.1, 5.3.4, 5.3.7)	
Abnormal Operation (5.3.1 - 5.3.9)	
Transformer Abnormal Operation (5.3.3, 5.3.7b, Annex C.1)	
Power Supply Output Short-Circuit/Overload (5.3.7)	

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.

The following supplements are provided as a part of this Test Record. NOTE: These supplements are only available to the Applicant via the CDA system.

Type	Supplement Id	Description
Datasheet	2-01	Test Record