

## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Listing
<b>CCN:</b>	QQGQ, QQGQ7 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
<b>Product:</b>	Switch Mode Power Supply
<b>Model:</b>	GT-41132-WWVV-X.X-T2 series: WW is the rated output wattage designation, with a maximum value of "60"; VV is the standard rated output voltage designation, with a maximum value of "48"; -X.X is optional or blank and denotes the output voltage differentiator, subtracting or adding X.X volts from standard output voltage VV in 0.1V increments
<b>Rating:</b>	Input: 100-240 Vac, 50-60 Hz, 1.5 A max.  Output: 12 Vdc, 5 A for Model GT-41132-6013-1.0-T2; Output: 19 Vdc, 3.42 A for Model GT-41132-6026-7.0-T2; Output: 24 Vdc, 2.7 A for Model GT-41132-6026-2.0-T2; Output: 48 Vdc, 1.25 A for Model GT-41132-6048-T2.
<b>Applicant Name and Address:</b>	GLOBTEK (HONG KONG) LTD UNIT 1402, BENSON TOWER 74 HUNG TO RD KWUN TONG KOWLOON HONG KONG

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 Underwriters Laboratories Inc. ('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.

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

Issue Date: 2011-12-14

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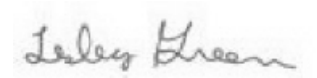
Report Reference #

E341351-A34-UL

Prepared by: HiuFai Seto  
Underwriters Laboratories Inc.

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Reviewed by: Lesley C Green  
Underwriters Laboratories Inc.

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**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**

- Electronic components mounted on PWB and house in plastic enclosure.

**Model Differences**

- All Models are similar to each other except for component D3 only provided in Model GT-41132-6013-1.0-T2, main isolating transformer (T1), and output rating.

**Technical Considerations**

- Equipment mobility : transportable
- Operating condition : continuous
- Mains supply tolerance (%) : +10%, -10%
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class II (double insulated)
- Mass of equipment (kg) : 0.212
- Protection against ingress of water : IP X0
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 degree C
- The means of connection to the mains supply is: Detachable power cord, Pluggable A

- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: Appliance inlet
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): -Output for Model GT-41132-6026-7.0-T2;, -Output for Model GT-41132-6026-2.0-T2;, -Output for Model GT-41132-6048-T2.
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual
- Unless otherwise specified, all tests are performed on EUT with installed R/C fuse FS1 from Ever Island Co Ltd ,Type 2010, rating T3.15A, 250 Vac to be representative of the worst case among all the other sources of fuse submitted under this investigation.

**Additional Information**


Revision: SR8227620-T001

Transfer File from the File E336418, Vol. X7, E336418-A33 into the File E341351, Vol. X8, E341351-A34.

**Additional Standards**

The product fulfills the requirements of: N/A

**Markings and instructions**

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Power rating - Class II symbol	Symbol for Class II construction  (60417-2-IEC-5172)
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
LPS Marking (Only for Models GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2 and GT-41132-6048-T2)	- Optional marked with "LPS" or "Limited Power Source"

**Special Instructions to UL Representative**

Inspect the transformer (T1) listed in BD1.0 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
GT-41132- WWVV-X.X- T2 series	Transformer(T1 )	--	Primary to Secondary	300 0	4242	1

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

All models covered in this report.

**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
N/A					

**TABLE: List of Critical Components**

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
01. Enclosure	Sabic Innovative Plastics China Co Ltd	SE1X	Two pieces construction, secured together by ultrasonic welding, rated V-1 or better, 105 degree C min. Minimum 1.7 mm thickness. See Enclosure ID-4-01 for dimensions	QMFZ2	UL
02. Appliance Inlet (CN1)	Tecx-Unions Technology Corp	SO-222	Rated 250 Vac, 2.5 A. Temperature on body for the component shall not exceed 75 degree C	AXUT2	UL
02a. Appliance Inlet (CN1) (Alternate)	Sun Fair Electric Wire & Cable (HK) Co Ltd	S-01	Rated 250 Vac, 2.5 A.	AXUT2	UL
02b. Appliance Inlet (CN1) (Alternate)	Supercom Wire & Cable Co Ltd	SC-12S	Rated 250 Vac, 2.5 A. Temperature on body for the component shall not exceed 75 degree C	AXUT2	UL
02c. Appliance Inlet (CN1) (Alternate)	Rich Bay Co Ltd	R-201SN90	Rated 250 Vac, 2.5 A. Temperature on body for the component shall not exceed 75 degree C	AXUT2	UL
03. Fuse (FS1)	Various	Various	Rated T3.15A, 250Vac.	JDYX	UL
03a. Fuse (FS1) (Alternate)	Conquer Electronics Co Ltd	MST	Rated T3.15A, 250Vac.	JDYX2	UL
03b. Fuse (FS1) (Alternate)	Ever Island Electric Co Ltd & Walter Electric	2010	Rated T3.15A, 250Vac.	JDYX2	UL
03c. Fuse (FS1) (Alternate)	Cooper Bussmann Inc	SS-5	Rated T3.15A, 250Vac.	JDYX2	UL
03d. Fuse (FS1) (Alternate)	Bel Fuse Inc	RST	Rated T3.15A, 250Vac.	JDYX2	UL
04. Thermistor (THR1) (optional)	--	--	Rated 2.5 ohm at 25 degree C, 5A.	--	--
05. Line Filter (LF1) (optional)	--	--	Rated 130 degree C. See enclosure ID 4-05 for dimension details.	--	--
05-1. Coil	Various	Various	Rated 130 degree C.	OBMW2	UL
05-2. Core	--	--	Ferrite core, see Enclosure for dimension details.	--	--
05-3. Triple Insulation Wire	Furukawa Electric Co Ltd	TEX-E	Rated 130 degree C	OBJT2	UL
05-3a. Triple Insulation	Great Leoflon	TRW(B)	Rated 130 degree C	OBJT2	UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
Wire (Alternate)	Industrial Co Ltd				
06. Varistor (MOV1) (Optional)	Various	Various	Rated minimum 300 Vac, minimum 385 Vdc.	VZCA2, XUHT2	UL
07. X-Capacitor (CX1) (Optional)	Cheng Tung Industrial Co Ltd	CTX	Rated maximum 0.33uF, minimum 250V, X1 or X2 type, min. 85 degree C.	FOWX2	UL
07a. X-Capacitor (CX1) (Optional) (Alternate)	Tenta Electric Industrial Co Ltd	MEX	Rated maximum 0.33uF, minimum 250V, X1 or X2 type, min. 85 degree C.	FOWX2	UL
07b. X-Capacitor (CX1) (Optional) (Alternate)	Ultra Tech Xiphi Enterprise Co Ltd	HQX	Rated maximum 0.33uF, minimum 250V, X1 or X2 type, min. 85 degree C.	FOWX2	UL
08. Bleeder Resistor (RS1, RS2)	--	--	Rated maximum 1M ohm, 1/4W, SMD type.	--	--
09. Line Filter (LF2) (optional)	--	--	Rated 130 degree C. See Enclosure ID 4-06 for dimensions details.	--	--
09-1. Coil	Various	Various	Rated 130 degree C.	OBMW2	UL
09-2. Core	--	--	Ferrite core, see Enclosure for dimension details.	--	--
10. Bridge Diode (BD1)	--	--	Rated 4A, 600 V minimum.	--	--
11. Storage Capacitor (C1)	--	--	Rated 120uF, minimum 400V, minimum 105 degree C.	--	--
12. Transistor (Q1)	--	--	Rated 10A, 500 V minimum.	--	--
13. Bridge Capacitor (CY1) (Optional)	Success Electronics Co Ltd	SE	Rated maximum 2200 pF, minimum 250V, Y1 type, 125 degree C.	FOWX2	UL
13a. Bridge Capacitor (CY1) (Optional) (Alternate)	TDK Corp	CD	Rated maximum 2200 pF, minimum 250V, Y1 type, 125 degree C.	FOWX2	UL
13b. Bridge Capacitor (CY1) (Optional) (Alternate)	Walsin Technology Corp	AH	Rated maximum 2200 pF, minimum 250V, Y1 type, 125 degree C.	FOWX2	UL
13c. Bridge Capacitor (CY1) (Optional) (Alternate)	Pan Overseas Electronics Co Ltd	AH	Rated maximum 2200 pF, minimum 250V, Y1 type, 125 degree C.	FOWX2	--
14. Optical Isolators (U1)	Lite-On Technology Corp	LTV-817	Isolation: 5000 Vac, minimum. 0.4 mm distance through insulation, minimum 110 degree C.	FPQU2	UL

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
14a. Optical Isolators (U1) (Alternate)	Sharp Corp Electronic Components And Devices Group	PC817	Isolation: 5000 Vac, minimum. 0.4 mm distance through insulation, minimum 100 degree C.	FPQU2	UL
14b. Optical Isolators (U1) (Alternate)	Everlight Electronics Co Ltd	EL817	Isolation: 5000 Vac, minimum. 0.4 mm distance through insulation, minimum 110 degree C.	FPQU2	UL
15. Transformer (T1) (for model GT-41132-6013-1.0-T2)		XF00530	Class B, see Enclosure ID 4-07 for dimension details.	--	--
15a. Transformer (T1) (Alternate) (for model GT-41132-6026-7.0-T2 and GT-41132-6026-2.0-T2)		XF00542	Class B, see Enclosure 4-08 for dimension details.	--	--
15b. Transformer (T1) (Alternate) (for model GT-41132-6048-T2)		XF00543	Class B, see Enclosure ID 4-09 for dimension details.	--	--
15-1. Insulation system		130-1	Class B, 130 degree C.	OBJY2	UL
15-2. Core	--	--	Ferrite core	--	--
15-3. Coil	Various	Various	Rated 130 degree C	OBMW2	UL
15-4. Bobbin	Sumitomo Bakelite Co., Ltd	PM-9820	Phenolic, rated V-0, max 150 degree C, measured min 0.8 mm thick	QMFZ2	UL
15-5. Insulating Tape	3M Company Electrical Markets Div (Emd)	1350F-1, 1350T-1	Rated 130 degree C	OANZ2	UL
15-5a. Insulating Tape (Alternate)	Bondtec Pacific Co Ltd	370S	Rated 130 degree C	OANZ2	UL
15-6. Tubing	Great Holding Industrial Co., Ltd	TFL, TFT, TFS	Rated 200 degree C	YDPU2	UL
15-7. Triple Wire (Secondary)	Great Leoflon Industrial Co Ltd	TRW(B)	Rated 130 degree C	OBJT2	UL
15-8. Varnish	John C Dolph Co	BC-346A	Rated 200 degree C	OBOR2	UL
15-8a. Varnish	P D George/Viking	V1630FS	Rated 130 degree C	OBOR2	UL



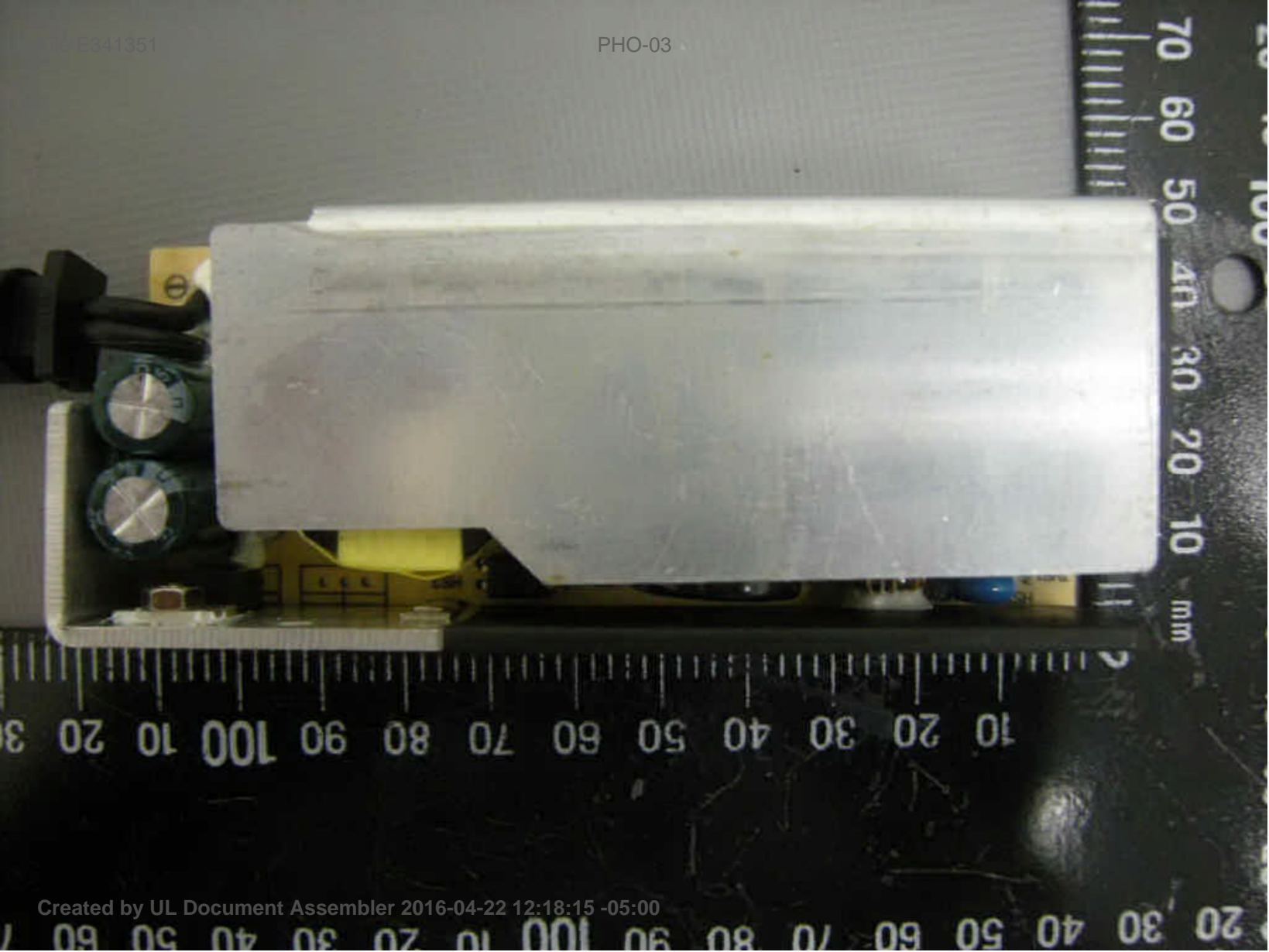
Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
(Alternate)					
16. Heat sink (HS1) (Primary)	--	--	Aluminum. See Enclosure ID 4-03 for dimension details.	--	--
17. Heat sink (HS2) (Secondary)	--	--	Aluminum. See Enclosure ID 4-03 for dimension details.	--	--
18. Tubing	Changyuan Electronics (Shenzhen) Co Ltd	CB-HFT	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; 125 degree C, 300 V, on heat sink HS2. See Enclosure ID-4-04 for dimensions	UZFT2, YDPU2, YDTU2	UL
19. Glue	Various	Various	Rated minimum V-2.	QMFZ2	UL
20. Internal Plastic Part Materials	--	--	Rated minimum V-2.	QMFZ2	UL
21. Output cord	Various	--	Minimum 30 V, 80 degree C, maximum 3.05 m, marked VW-1 or FT-1.	AVLV2, ZJCZ	UL
22. Strain Relief Of Output Cord	Various	Various	PVC bushing integrally molded on output cord. Provided when Output Cord provided. See enclosure ID- for dimension details.	QMFZ2	UL
23. PWB	Various	Various	V-1 or better, minimum 130 degree C.	ZPMV2	UL
24. Label	Various	Various	Minimum 60 degree C. if maximum surface temperature not specified.	PGDQ2, PGJI2	UL
25. Power supply cord (Optional)	--	--	Detachable, Type SVT or SPT-2, min. 125 V, with NEMA 1-15P or 250 V, 15 A, with NEMA 2-15P. Minimum 18AWG/3C, the length of power supply cord shall be between 1.5m and 4.5m,	ELBZ	UL

## **Enclosures**

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-01	Overall View No. 1 of Enclosure for Models GT-41132-6013-1.0-T2, GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2 and GT-41132-6048-T2
Photographs	3-02	Overall View No. 2 of Enclosure for Models GT-41132-6013-1.0-T2, GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2 and GT-41132-6048-T2
Photographs	3-03	Inside View for Models GT-41132-6013-1.0-T2, GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2 and GT-41132-6048-T2
Photographs	3-04	Component View for Models GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2 and GT-41132-6048-T2
Photographs	3-05	Component View for Models GT-41132-6013-1.0-T2
Photographs	3-06	Trace View for Models GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2 and GT-41132-6048-T2
Photographs	3-07	Trace View for Models GT-41132-6013-1.0-T2
Diagrams	4-01	Dimension of Enclosure
Diagrams	4-02	Dimension of Strain Relief Means
Diagrams	4-03	Dimension of Heat Sink (HS1 and HS2)
Diagrams	4-04	Dimension of Tube on HS2
Diagrams	4-05	Construction of Choke (LF1)
Diagrams	4-06	Construction of Choke (LF2)
Diagrams	4-07	Construction of Transformer(T1) for Model GT-41132-6013-1.0-T2
Diagrams	4-08	Construction of Transformer (T1) for Model GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2
Diagrams	4-09	Construction of Transformer (T1) for Model GT-41132-6048-T2
Schematics + PWB	5-01	PWB Trace for Model GT-41132-6013-1.0-T2, GT-41132-6026-7.0-T2, GT-41132-6026-2.0-T2 and GT-41132-6048-T2
Manuals		
Miscellaneous		



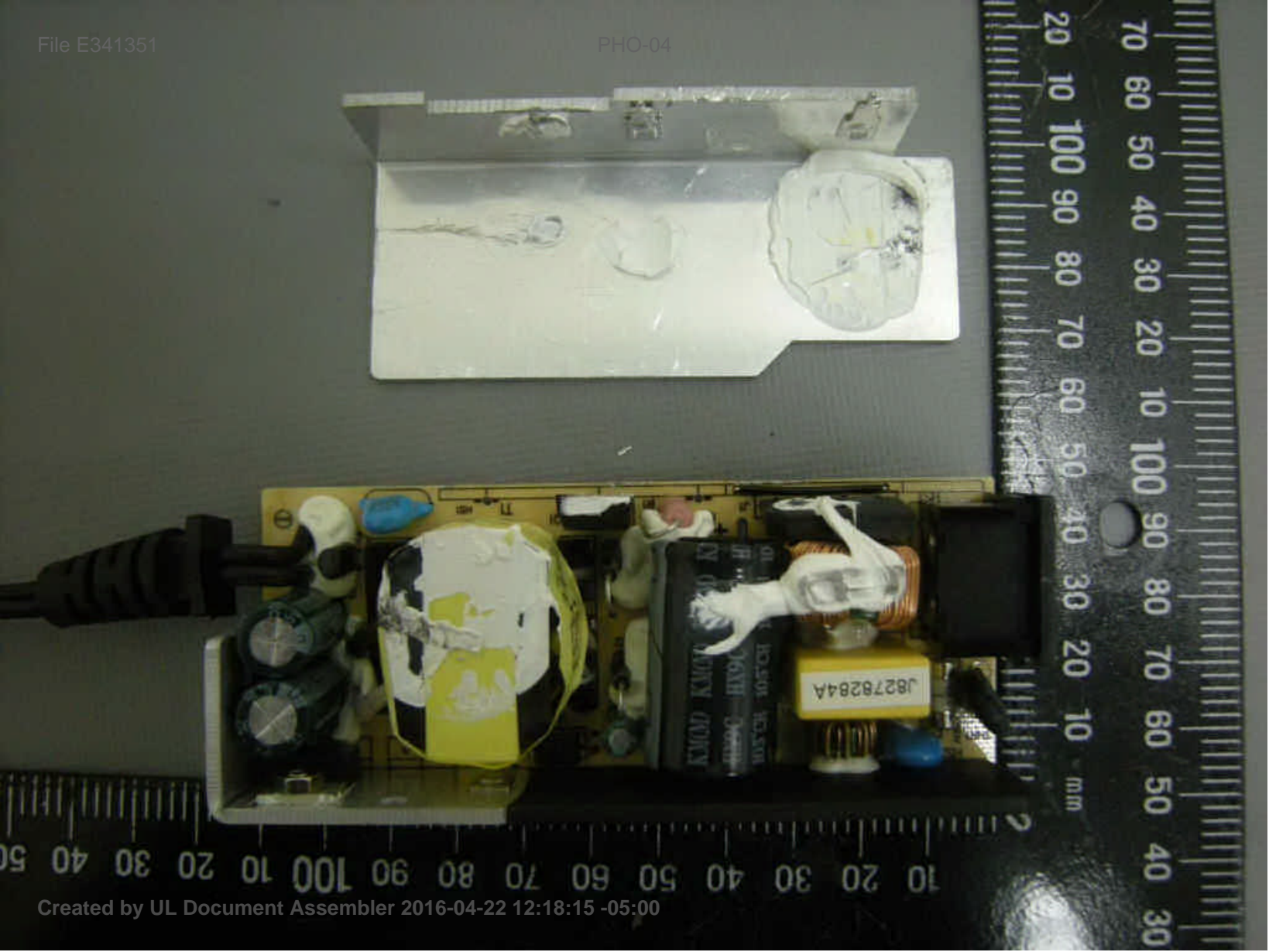


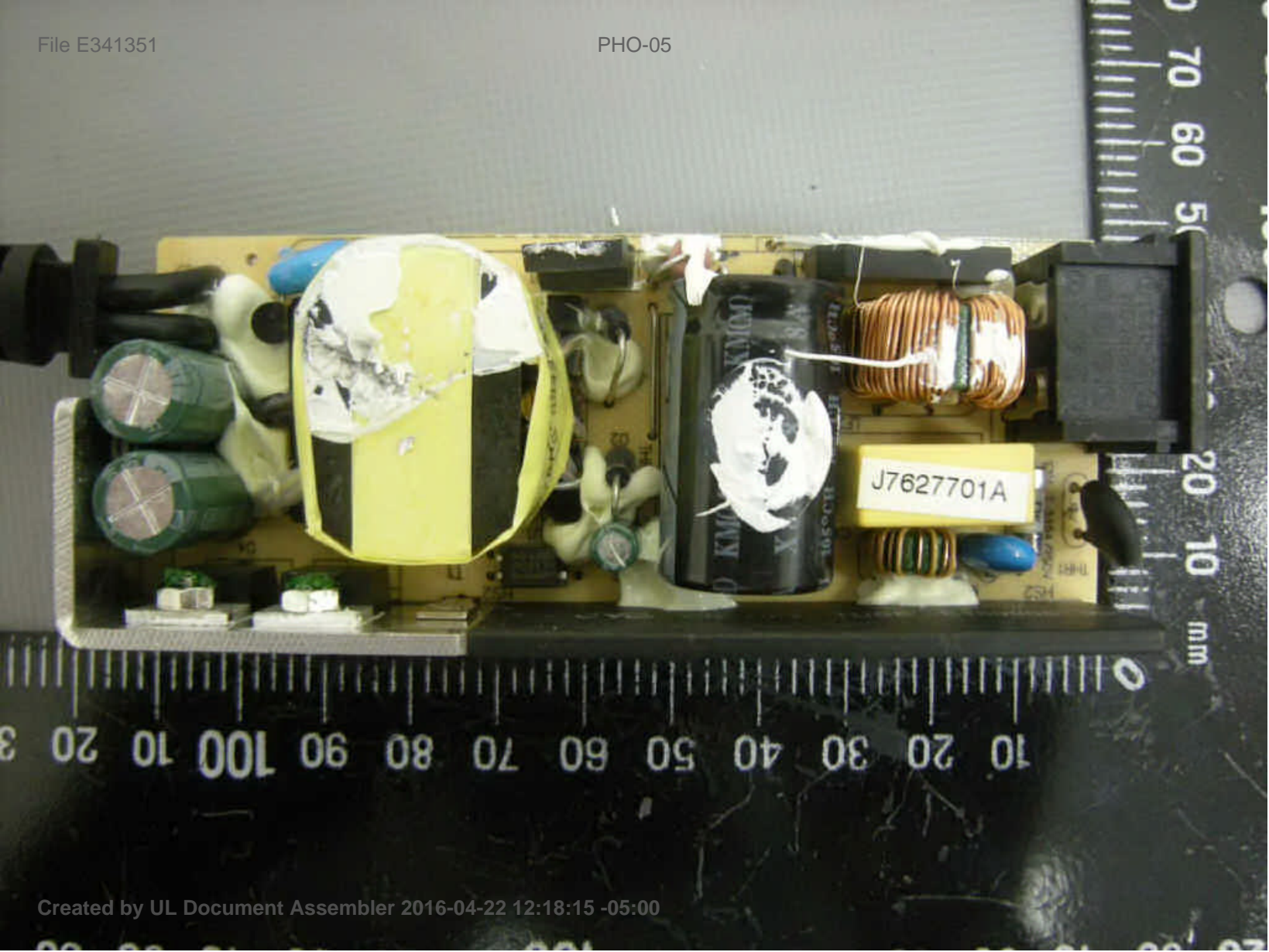


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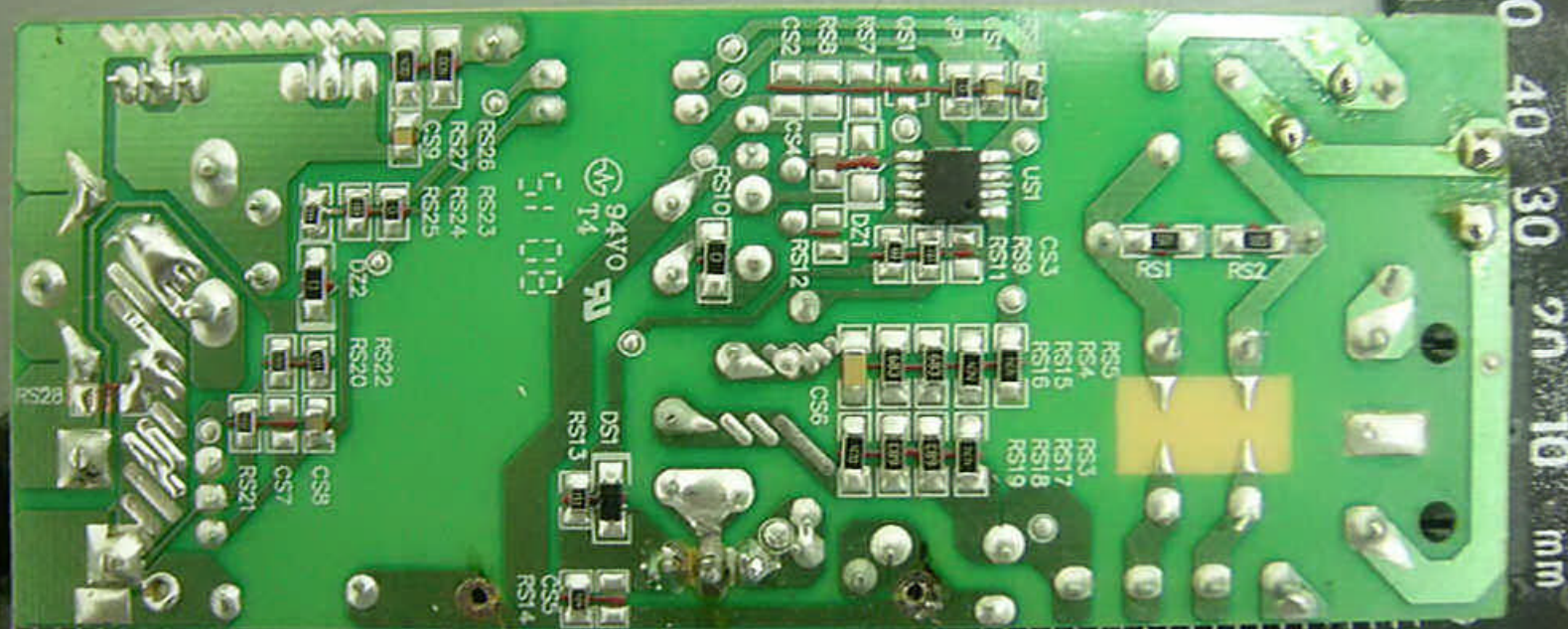
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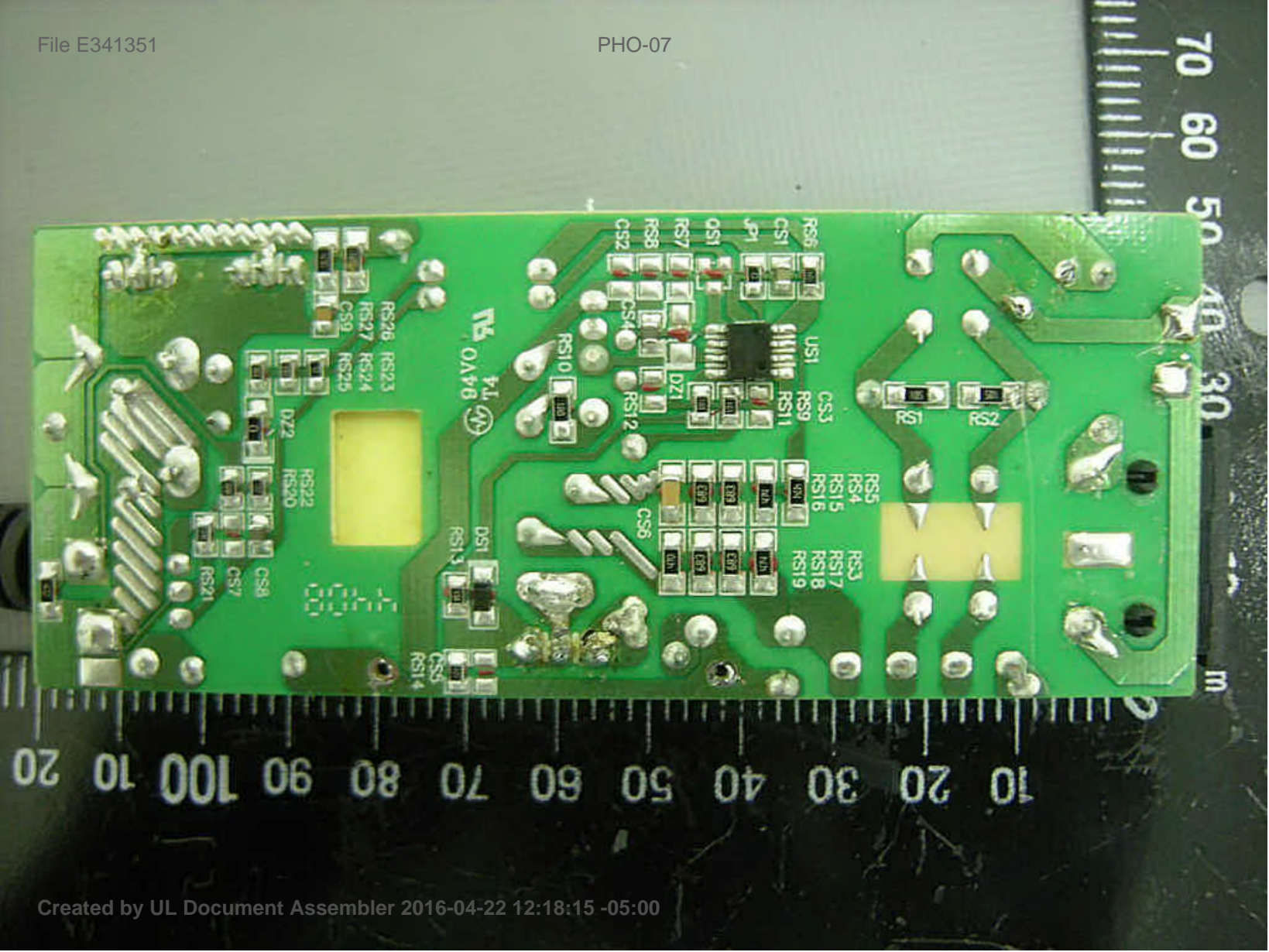






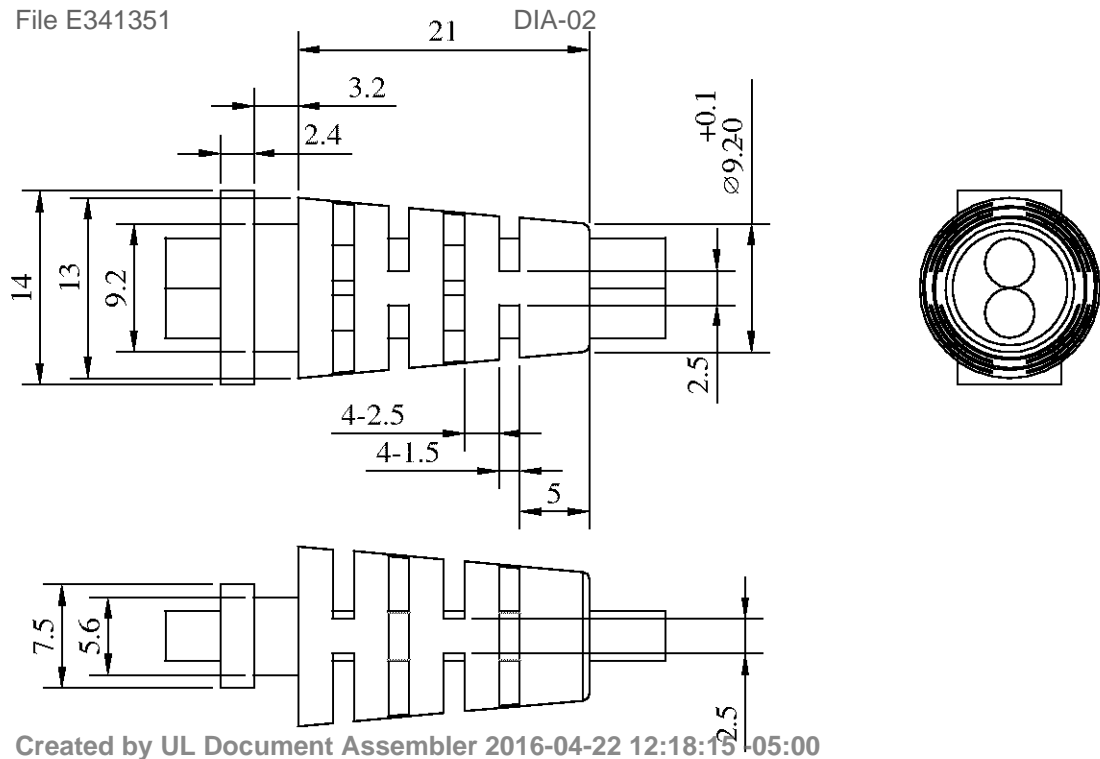








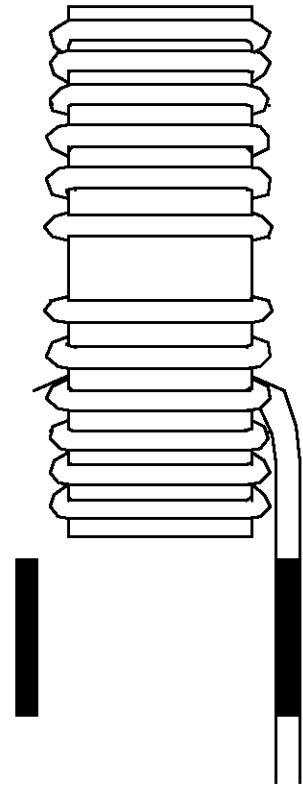
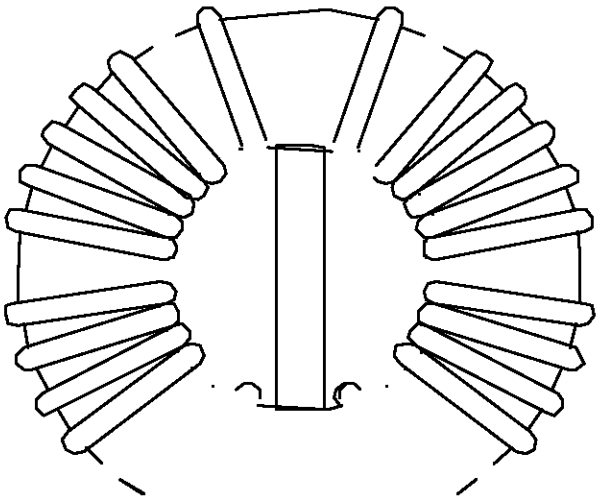








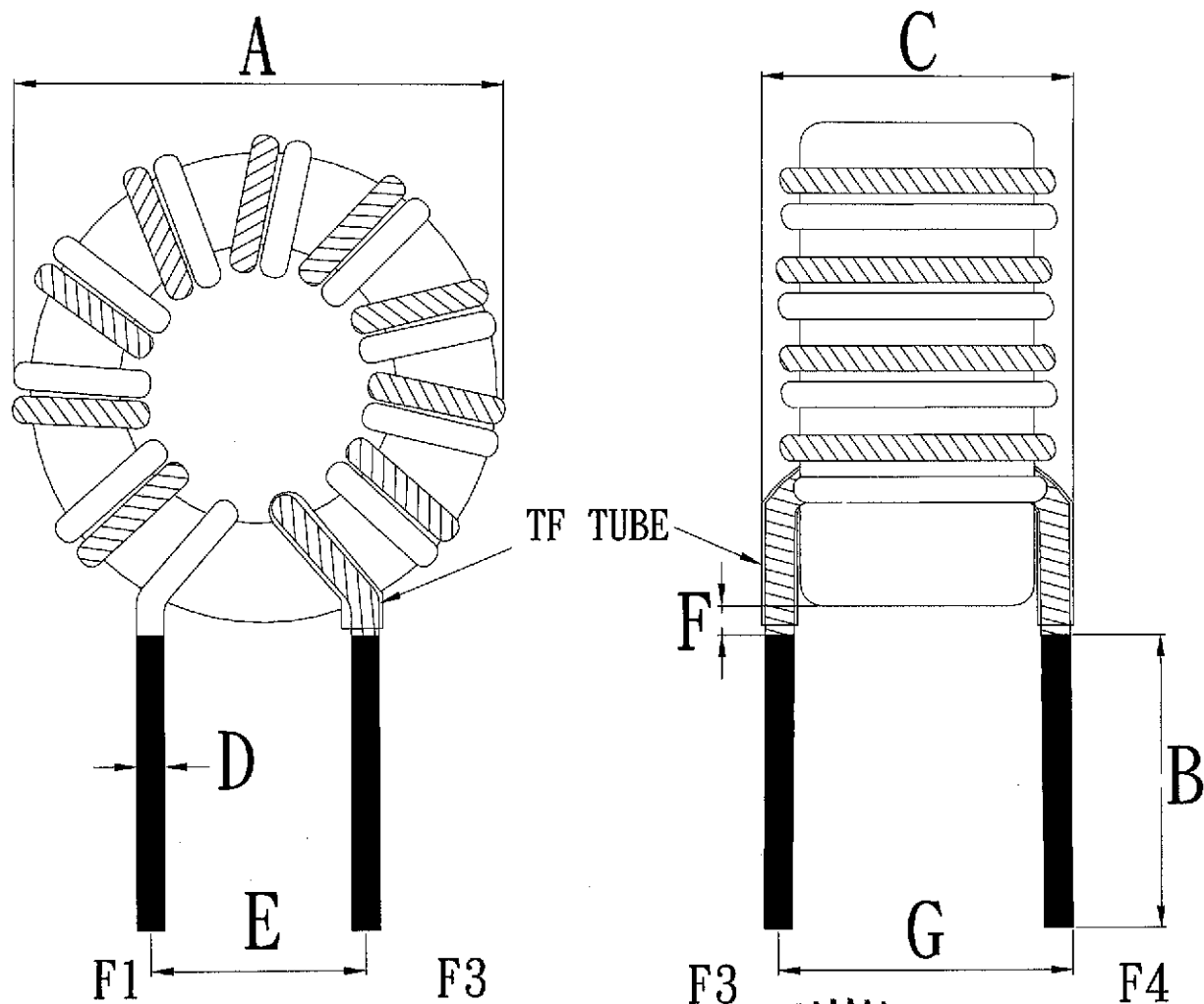









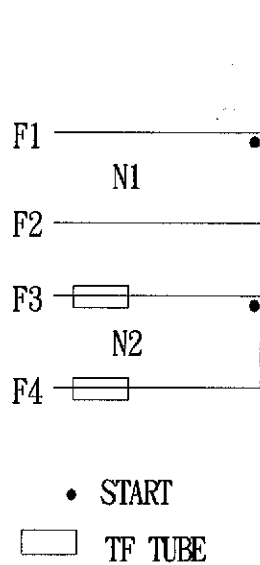
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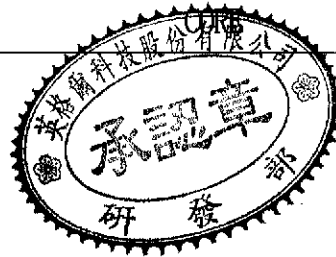
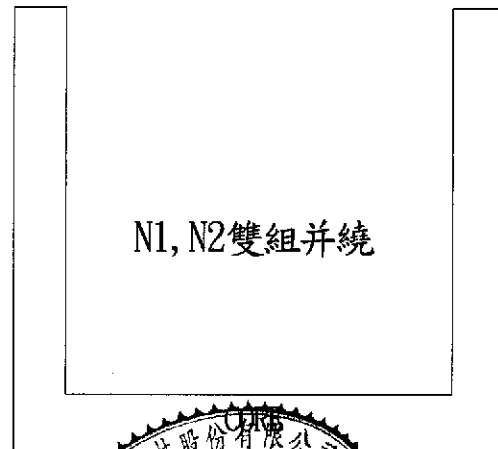
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	MAX	+/-2.0	MAX	+/-0.1	+/-0.5	MAX	+/-0.5		
SPEC	13.0	15.0	9.0	0.4	3.5	1.2	6.0		
 <b>銳普電子股份有限公司</b> <b>XEPEX ELECTRONICS CO., LTD.</b>					DESCRIPTION	CHOKE COIL			
					Customer P/N	NF00025 REV:1			
					XEPEX P/N	A9121-1449002010(1.0)			
DRAWER	許秀連		CHECKED	曾春萍		龍金蘭	APPROVED	呂理敦	

QM-TP-7310-04

## 2.SCHEMATIC: (線路圖)



## 3.WINDING: (剖面圖)




## 4.WINDING TABLE: (繞線結構)

Winding No (組別)	Margin Tape (檔牆膠帶)	PIN (腳位)	Wire & Wire Copper (線徑 X 股數)	Turns (圈數)	Winding Tape (繞線方式)	Tape Layer (膠帶層次)	Tube (套管)
N 1	0	F1~ F2	0.40 $\phi$ x1P	9.5TS	雙組并繞 (均繞)	0	0
N 2	0	F3~ F4	0.40 $\phi$ x1P (三層絕緣線)	9.5TS		0	TF TUBE

## NOTE:

1. 圈數以外圈計算.
2. 繞線須平整美觀,銅線漆包膜不可破損或脫落.
3. 產品須含浸.
4. N2 使用三層絕緣線繞制,須先脫皮再鍍錫,且進出線須穿 TF TUBE.
5. 各部分尺寸請參照外觀圖所示.

 銳普電子股份有限公司 XEPEX ELECTRONICS CO., LTD.				DESCRIPTION		CHOKE COIL							
				Customer P/N		NF00025 REV:1							
				XEPEX P/N		A9121-1449002010(1.0)							
DRAWER		許秀連		CHECKED		曾春萍		龍金蘭		APPROVED		呂理敦	

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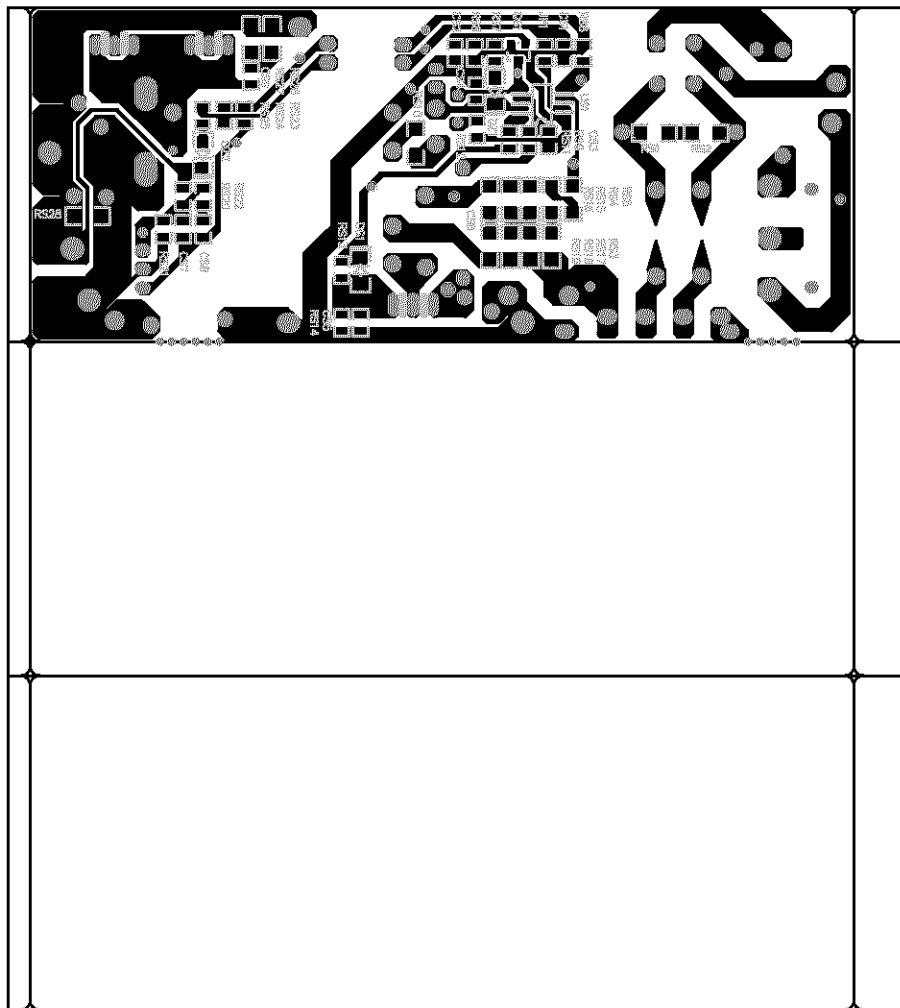


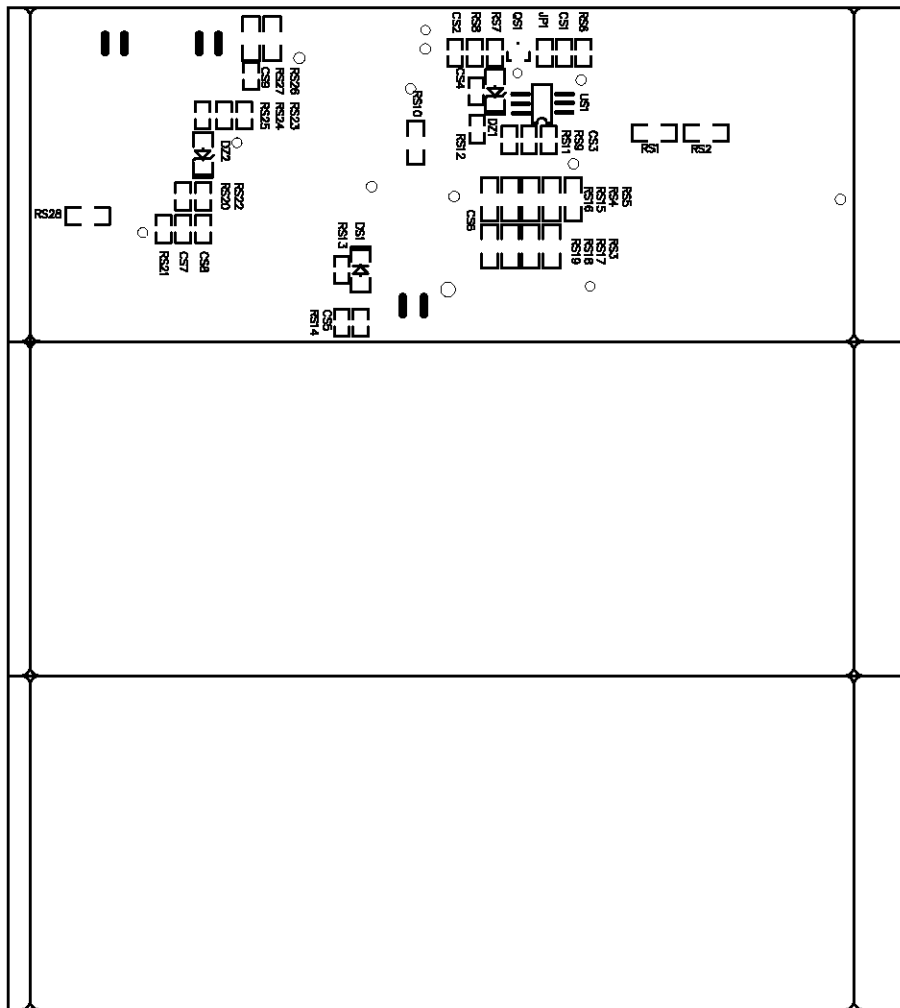












## **Test Record No. 1**

Tests on all models are not required due to transferring file from Applicant Globtek (Suzhou) Co Ltd., File E336418, Vol. X7, E336418-A33.