




**WHT 華興變壓器製造廠有限公司**  
**WAH HING TRANSFORMER MFY. LTD.**

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***SPECIFICATION FOR APPROVAL***

<b>Customer:</b> WAH HING		
<b>Customer P/N:</b>	<b>Customer Rev.:</b>	
<b>Customer Model No.:</b>	<b>Customer ID:</b> W050	
<b>Wah Hing Model No.:</b> T09603A	<b>Wah Hing Rev.:</b> 02	
<b>Article:</b> AC POWER TRANSFORMER (CLASS B)		
<b>Standard:</b> EN61558-2-6	<b>Safety No.:</b>	
<b>Catalog No.:</b> V42AJ-15ALP7	<b>Date:</b> 2013-12-06	
<b>Remarks:</b> <i>Please note items listed in page.2 that requires your consent for deviation.</i>		
 Eng. Dept. 鄧向陽	 Eng. Dept. 劉洪福	 Eng. Dept. 李建华
<b>Designed/Maker</b>	<b>Checked by</b>	<b>Approved by</b>

*Please evaluate the samples, sign this approval sheet and return to WAH HING*

- Approved
- Rejected
- Conditional Approved

Comments:

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*Customer Approved by :* \_\_\_\_\_

Signature & Date

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**PRODUCT SPECIFICATION**

**Deviation and History**

*Please note items listed below does not meet your specifications and requires your consent for deviation:*

Item	Customer specification	Suggestion specification
1		
2		
3		
4		

Remarks:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

△8				
△7				
△6				
△5				
△4				
△3				
△2	02	P3,P4 & P6 Changed	Deng	2013-12-06
△1	01	P3 Changed	Deng	2013-08-21
--	00	Initial Issue	Cao	2013-04-26
Item	Rev	Description	Sign	Date

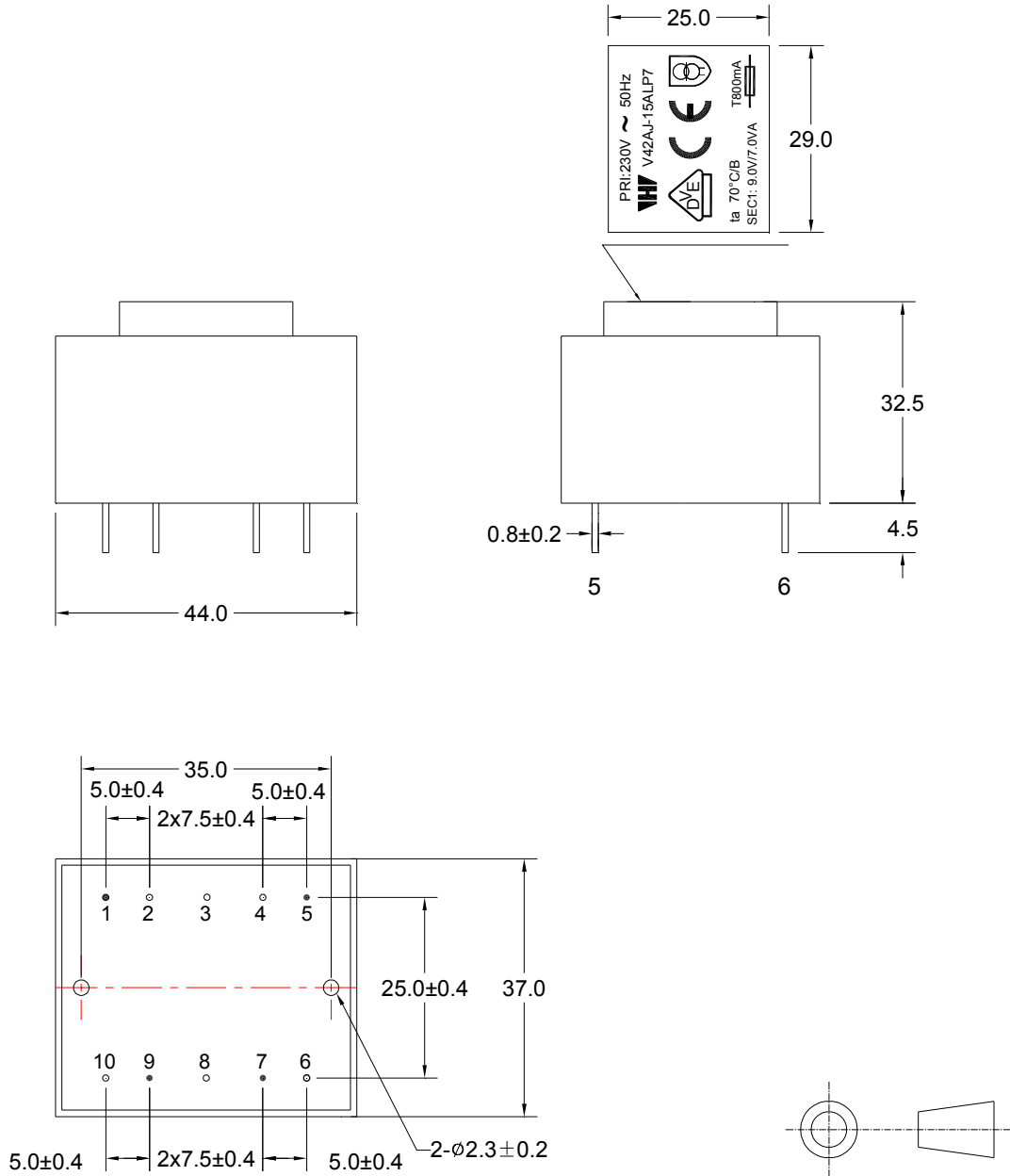
History

Customer P/N:

Wah Hing Model No.: T09603A

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**Dimensions and Diagram**



**Notes:**

1. Unit: mm
2. Marking: pad-print on top of case, letter in white, background in black
3. Pins exist at position: 1, 5, 7, 9.
4. The other tolerance is follows:
 

x.	$\pm 1.5$
.x	$\pm 1.0$
.xx	$\pm 0.50$

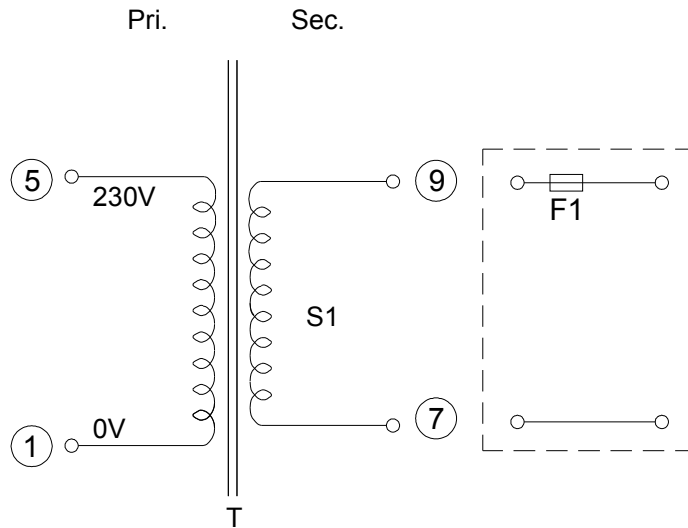
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**Electrical Characteristics**

**Circuit diagram:**



T            ---- Transformer

F1            ---- Additional External Protection Device      F1=0.8A.

Remark: The transformer need additional external protection device in it's secondary when used by user,  
 Including testing in Lab. (Pls refer circuit diagram for detail.)

**Tabel-1: Secondary loaded voltage:**

Primary input			S1 (9-7) with 0.8A current fuse	S2	S3	S4	S5
	Rated load	Load	778mA ac				
230Vac 50 Hz	1	Standard	9Vac				
		No Load	0 A				
230Vac 50Hz	2	Standard	12Vac				
		Load					
253Vac 50 Hz	3	Standard					
		Load					
207Vac 50 Hz	4	Standard					
		Load					

Tabel-1 notes:

1. If not specified, the secondary voltage tolerance is  $\pm 5\%$
2. Ambient temperature : 70°C

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**Electrical Characteristics**

Standard atmospheric conditions:

Unless otherwise specified, the standard range of atmospheric conditions for marking measurements and tests are as follows:

Ambient temperature : 15°C to 35°C

Relative humidity : 25% to 85%

If there is doubt about the results, measurement shall be made within the following limits:

Ambient temperature : 20°C ± 1°C

Relative humidity : 63% to 67%

Operating temperature range:

-10°C to +70°C

1	Output voltage And current	<input checked="" type="checkbox"/> Measured in a.c. circuit <input type="checkbox"/> D.C. circuit including rectifying circuit	Refer to Page 4
2	Rated primary Voltage	<input checked="" type="checkbox"/> 50Hz <input type="checkbox"/> 60HZ <input type="checkbox"/> Both 50Hz and 60Hz	<u>230V</u>
3	No load current	Input <u>230Vac</u> , <u>50Hz</u>	<u>50mA</u> or less
4	Stand-by consumption	Input <u>230Vac</u> , <u>50Hz</u>	<u>----</u> W or less
5	Secondary voltage		Refer to Page 4
6	Insulation resistance	Apply a voltage of 500V d.c. for 1min.: Between the primary and core Between the primary and secondary	<u>100M</u> Ω or more
7	Dielectric strength	Between primary and secondary: <u>3.75KVac</u> for 1min. 2mA	No damage such as Breakdown, etc.
8	Layer dielectric Strength	Apply <u>(A)</u> V, 400Hz for 15s to the primary terminal of <u>(B)</u> V. (A) <u>460V</u> , (B) <u>230V</u>	No damage such as Breakdown, etc.
9	Primary direct Current resistance	Between terminals of <u>----</u> and <u>----</u>	<u>---</u> Ω
10	Secondary direct Current resistance	Between terminals of <u>----</u> and <u>----</u>	<u>---</u> Ω
11	Temperature rise	The voltage of <u>(A)</u> V shall be applied to the primary terminal of <u>(B)</u> V. Measurement shall be made after constant temperature are reached. (A) <u>253V</u> , (B) <u>230V</u>  Secondary load conditions: <input type="checkbox"/> All at the rated current <input type="checkbox"/> The input voltage is increased by 6% after the rated current is set. <input checked="" type="checkbox"/> The rated current is set, with the input voltage 10% high. <input checked="" type="checkbox"/> Other ( Ta=70°C )	Windings up to: <u>50</u> K. (by the resistance method) Iron core up to: <u>----</u> K. (by the thermometer method)

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Electrical Characteristics				
12	Damp heat	<p>The power transformer shall be stored at an ambient temperature of 40°C±2°C with relative humidity of 90% to 95% for 48h. Then condensation shall be removed. After which measurement shall be made within 10 min.</p>	Insulation resistance	5M Ω or more
			Dielectric strength	Clause 7 shall be satisfied. Trip current 5mA
13	Dry heat	<p>The power transformer shall be stored at an ambient temperature of 100°C±3°C for 6h. After which measurement shall be made within 10 min.</p>	Insulation resistance	5M Ω or more
			Dielectric strength	Clause 7 shall be satisfied. Trip current 5mA
14	Abnormal temperature test	<input type="checkbox"/> 15-day test <input checked="" type="checkbox"/> Short-circuit and overload test with	Windings up to: <u>175</u> °C	
15	Beat noise (Hum)		<u>30</u> dB or less	
16	Thermo-protector	Primary windings built in / thermal fuse.		
17	Mass		<u>190</u> g (reference)	

**CONSTRUCTION DIAGRAM AND MATERIAL LIST**

**1. Internal construction**

- (1) Lead wire and winding shall be connected by twisting together.
- (2) Thickness and materials of insulation and also creepage, clearance and thickness of insulation, shall conform to applicable safety standard.

**2. Tensile strength of terminals (pins)**

A load of 20 N shall be applied in the axial direction. When it is retained for 10±1 seconds, there shall be no loosening or breakdown.

For one not exceeding 2 Kg, the static load same with the self weight shall be applied.

**3. Appearance**

There shall be no scratches, dents, or distinct blemishes on the body, pin.

**4. Fitting strength**

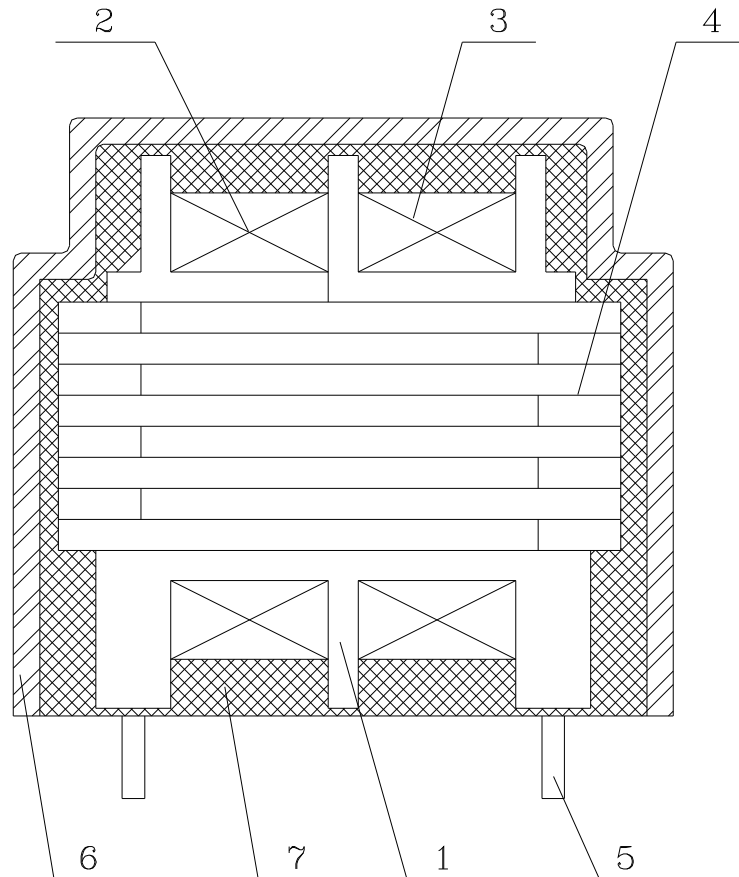
There shall be no damage such as deformation when a static load of 20 N is applied in all directions for 30 s.

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**Construction Diagram**



- |                      |                     |
|----------------------|---------------------|
| 1. BOBBIN            | 5. PIN              |
| 2. PRIMARY WINDING   | 6. POTTING BOX      |
| 3. SECONDARY WINDING | 7. POTTING MATERIAL |
| 4. LAMINATION CORE   |                     |

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**Materials List**

No.	Description	Material, Thickness/Turns	Manufacture	Safety No.
1	Bobbin	PETP, FR530 UL94V-0	E.I. Dupont	E41938
		PET-T102G30, 0.71mm min. UL94V0	Shin kong	E107536
2	Primary Winding	Polyurethane enameled copper wire MW28C or MW75C	Ta win	E152187
			FENG CHING	E172395
3	Secondary Winding	Polyurethane enameled copper wire MW28C or MW75C	Ta win	E152187
			FENG CHING	E172395
4	Lamination Core	Silicon sheet steel, EI41.	Kawasaki	None
5	Pin	Copper alloy, 0.8mm diameter	WELL FORE	None
6	Potting Box	A216V30, UL94HB	RHODIA	E44716
7	Potting Material	Epoxy 9001A/9001B UL94V-0	Wells Chemical	E222812

1. All materials meet ROHS requirement.
2. Please advise if customer have any special requirements.  
 Otherwise, all materials may be substituted by other equivalent manufacturer.

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