

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

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 12&13/F, Blk. A, Chung Mei Centre, 15-17 Hing Yip St., Kwun Tong, Kowloon, Hong Kong  
 Tel: 852-2341 2297 Fax: 852-2341 5941 E-mail: mkt@wahhing.com.hk

## SPECIFICATION FOR APPROVAL

<b>Customer:</b> Micros.sp.j.		
<b>Customer P/N:</b>	<b>Customer Rev.:</b>	
<b>Customer Model No.:</b>	<b>Customer ID:</b> M098	
<b>Wah Hing Model No.:</b> T08157B	<b>Wah Hing Rev.:</b> 00	
<b>Article:</b> AC POWER TRANSFORMER (CLASS B)		
<b>Standard:</b> EN61558-2/VDE	<b>Safety No.:</b>	
<b>Catalog No.:</b> V30AJ-10A3P7	<b>Date:</b> 2007-03-26	
<b>Remarks:</b> Please note items listed in page.2 that requires your consent for deviation.		
		
<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:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

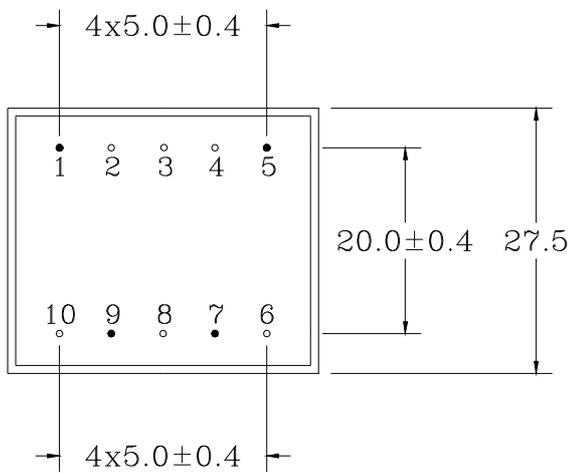
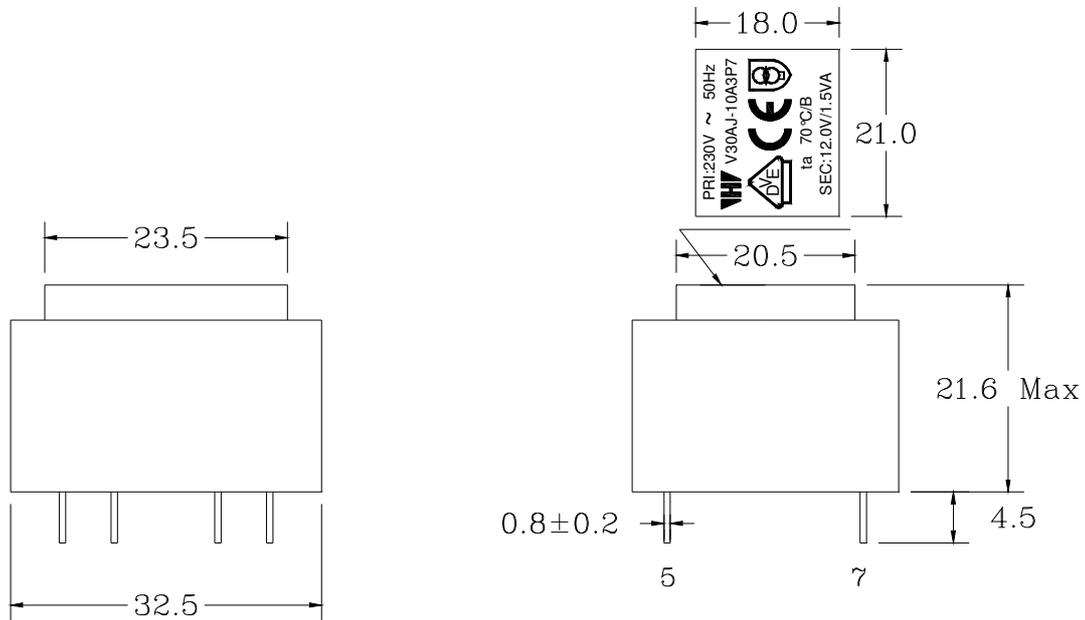
△8				
△7				
△6				
△5				
△4				
△3				
△2				
△1				
--	00	Initial Issue	Deng	2007-03-26
Item	Rev	Description	Sign	Date

History

Customer P/N: \_\_\_\_\_ Wah Hing Model No.: **T08157B**

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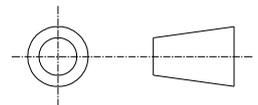
**Dimensions and Diagram**



**Notes:**

1. Unit: mm
2. Marking: is 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.	1.0
.x	1.0
.xx	0.30



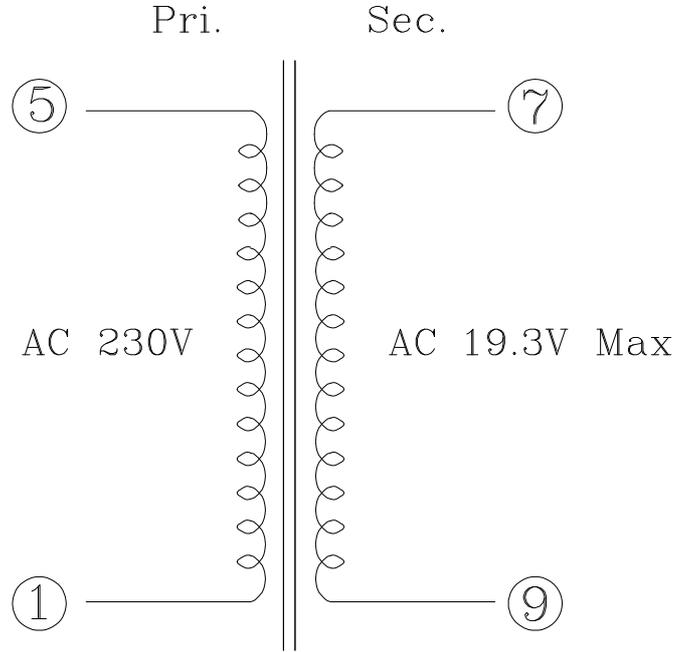
Customer P/N:

Wah Hing Model No.: T08157B

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**E Electrical Characteristics**

**Circuit diagram:**



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

Primary input			S1	S2	S3	S4	S5
230Vac 50 Hz	Rated load	Load	125mA ac				
		Standard	12.0Vac				
230Vac 50Hz	1	No Load	0 A				
		Standard	19.3Vac Max				
253Vac 50 Hz	2	Load	/				
		Standard	/				
207Vac 50 Hz	3	Load	/				
		Standard	/				
	4	Load					
		Standard					

Tabel-1 notes:

1.If not specified, the secondary voltage tolerance is  $\pm 10\%$ .

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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>28mA</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>243.8V</u> , (B) <u>230V</u>  Secondary load conditions: <input type="checkbox"/> All at the rated current <input checked="" type="checkbox"/> The input voltage is increased by 6% after the rated current is set. <input 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>28</u> dB or less
16	Thermo-protector	Primary windings built in / thermal fuse.		
17	Mass			<u>75</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. Humidity resistance treatment of windings varnish impregnation**

**3. 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.

**4. For transformers with varnish impregnation treatment, varnish stuck on the bottom or in holes shall not interfere when assembling the product.**

**5. Appearance**

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

**6. Fitting strength**

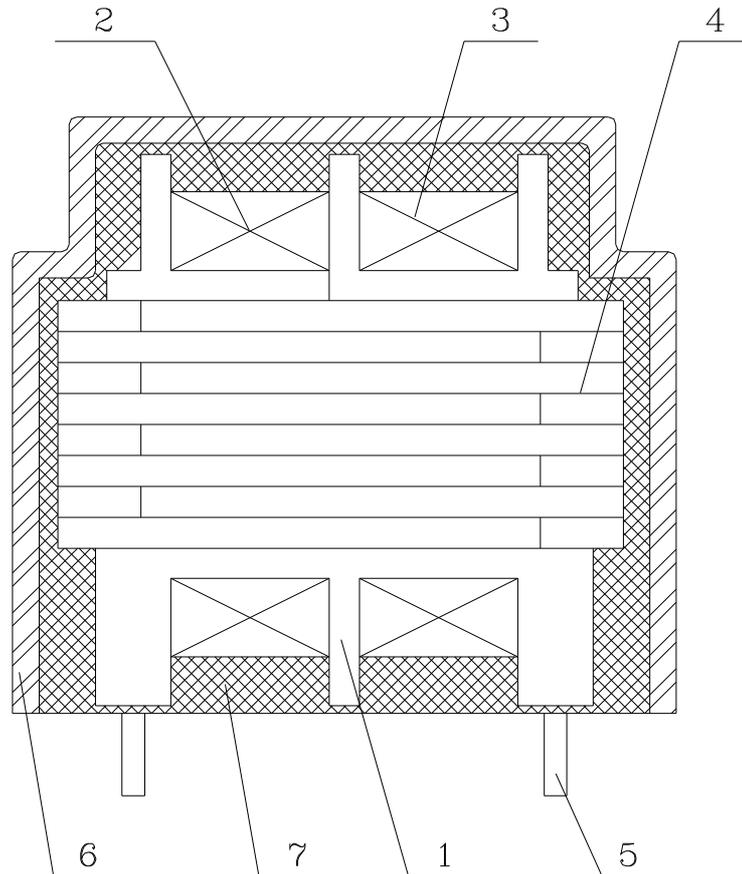
There shall be no damage such as deformation when a static load of 20 N is applied in all directions for 30 s.

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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   |                     |

Customer P/N:

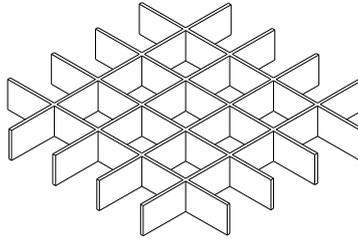
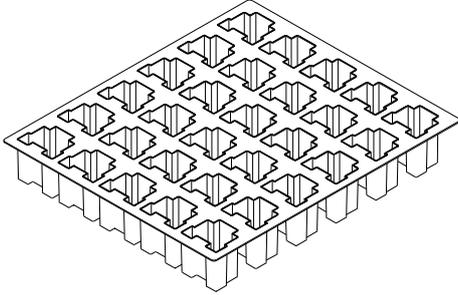
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**Packing Diagram**

Internal:

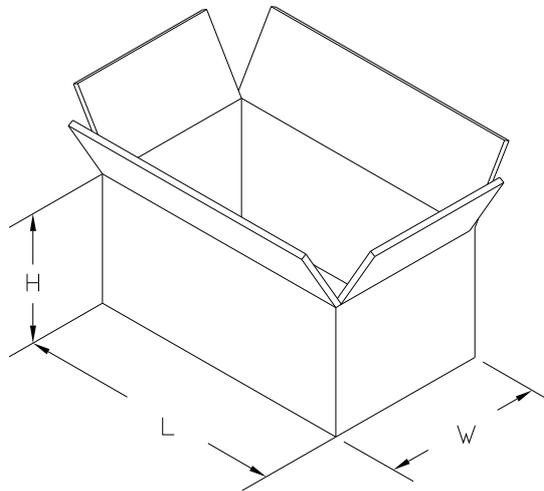


Plastic Package (  )

Chamber (  )

Other (  )

Carton box:



Packing description:

	L	W	H
Size (cm)	28	24	19
Tolerance	+2/-0	+2/-0	+2/-0
QTY (pcs)	180		
G. W. (Kg)	15		

Remarks:

1. Storage condition:  
 Temperature: -20 ~ +60°C  
 Relative humidity: 30% ~ 80%
2. Storage time: 6 months
3. Antistatic: no requirement
4. Please advise if any comment on packing information, Otherwise, this information will apply in production.

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**ELECTRICAL TESTING DATA SHEET**

[MSF No: 070336 ]

Condition: Input: 230 Vac; f0		Room Temperature: 26 °C										
DESCRIPTION	SPEC	Pin No.	1	2	3	4	5	6	7	8	9	10
Pri Exec Io(mA)(MAX)	28		11.7	12.0	12.2							
Pri DCR(Ω)			25.9	24.4	24.1							
No load loss (W)			0.75	0.80	0.80							
Sec V <sub>0</sub> (VAC)	19.7 Max		18.84	18.86	18.83							
V <sub>s</sub> AC (VMA)	12		12.59	12.65	12.65							
Hi-Pot Test:												
Primary-Secondary & Core	2.7kV/min		✓	✓	✓							
Secondary-Core												
Insulation Resistance	≥ 100MΩ		✓	✓	✓							
Hi-Pot Test Equipment:	<input type="checkbox"/> PM-106 <input type="checkbox"/> IMWV58 <input checked="" type="checkbox"/> IMWV66	Judgement:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG									
Customer: M&KOS		Rev No.:	80									
Wahhing Model No.: T0 B1573		Tested By:	[Signature]									
		Approved By:	[Signature]									
		Chg No.:	100									
		Date:	26/11/2010									