

PRODUCT SPECIFICATION

新弘智

SPEC. NO: T-0634-017B

DATE: Jul.26,2018

CUSTOMER'S PRODUCT NAME:

EMTEK PRODUCT NAME:

BLN2012-750-2P-TSL

THIS SPECIFICATION IS:

- FULLY ACCEPTED
 DENIED
 ACCEPTED UNDER THE FOLLOWING CONDITIONS



SIGNATURE: _____ DATE: _____

NAME(PRINT): _____

TITLE: _____

 **EMTEK CO., LTD.**

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FACTORY:
39,Chingao Rd.,(305)Hsinpu,
Hsinchu Hsien,Taiwan,R.O.C
TEL: 03-5894-433
FAX: 03-5894-523

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1. Scope

This specification applies Micro Chip Transformers BLN2012-750-2P-TSL to be delivered to user.

1:1 Broad Band Baluns For TV Tuner Applications

1-1 Features

1. Ultra Miniture Wire Wound Transformer (2.0 x 1.2 x 1.2mm)
2. Low Insertion Loss
3. Wideband Frequency Range
4. Surface Mount

1-2 Applications

TV tuners, Cable TV tuners and Communication applications that require unbalance mode to balance mode conversion.

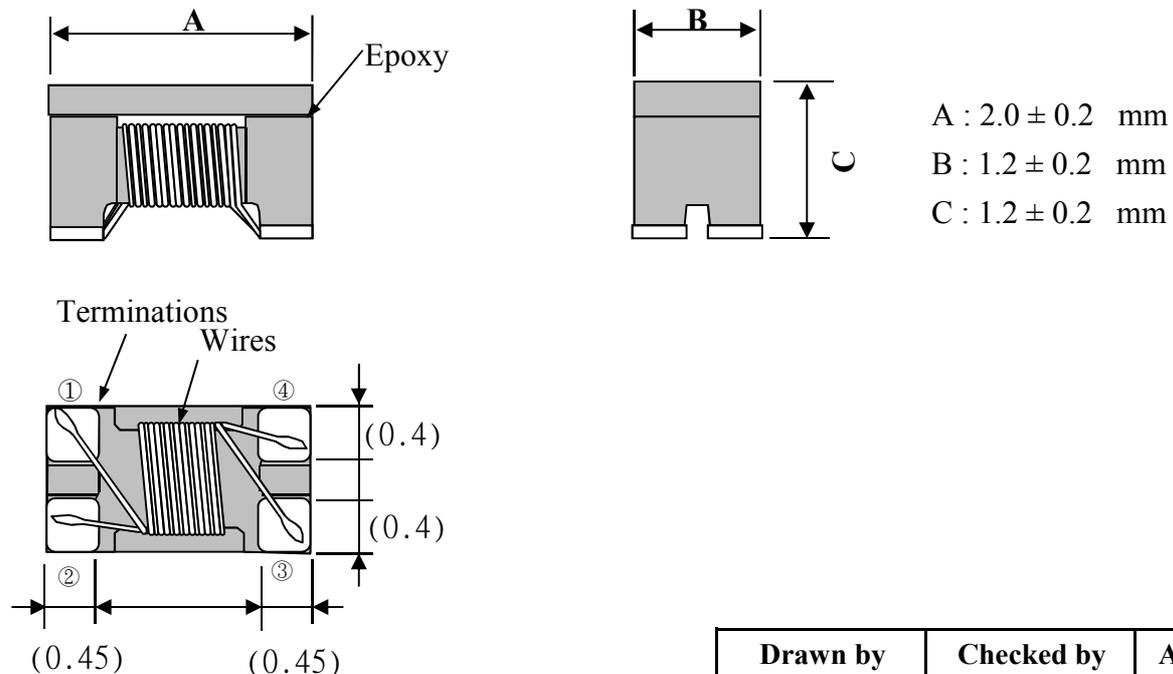
2. Product Identification

BLN 2012 - 750 - 2P - TSL

(1) (2) (3) (4) (5)

- (1) Product name
- (2) Shapes and dimensions
- (3) Impedance
750:75Ω
- (4) Number of Line : 2P: 2-Line
- (5) Customer Design

3. Shapes and Dimensions



Drawn by	Checked by	Approved by
Cindy Nov. 24. 2015	Zheny Nov. 24. 2015	Su Nov. 24. 2015

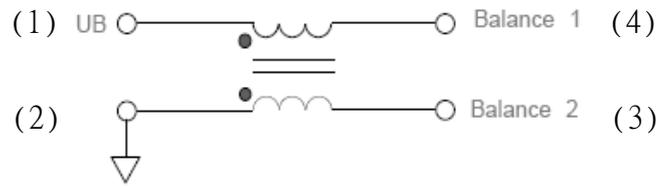
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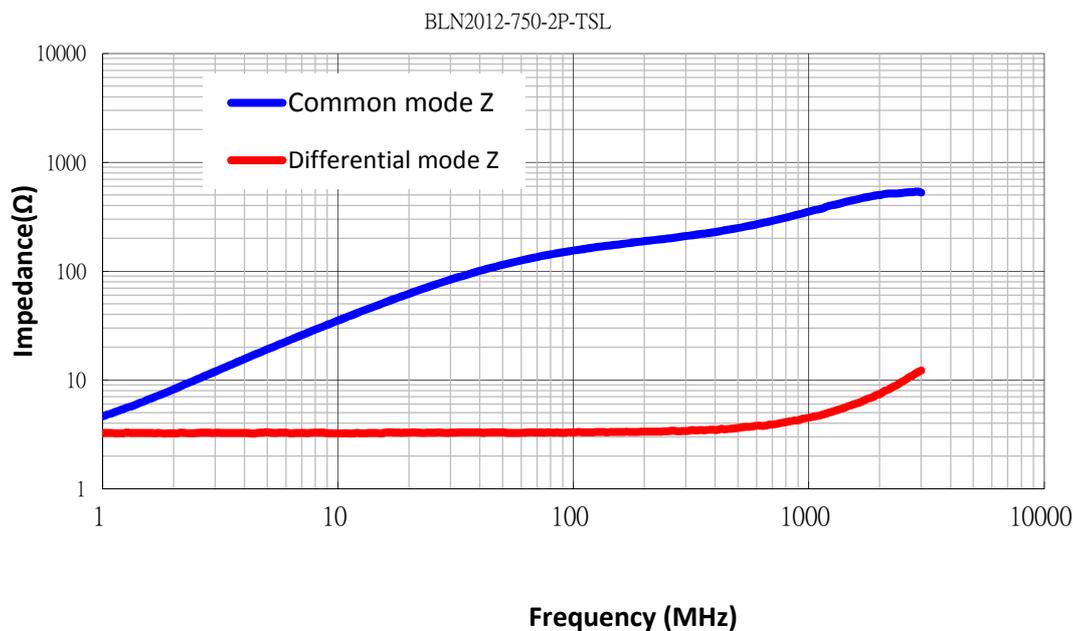
4. Equivalent Circuit



5. Electrical Characterisitcs

5-1 Electrical Spec.

Limit Line Setup						
Parameter	Frequency(MHz)		Limit(dB)	(Ω)	mA	V
	Start	Stop	Typ.			
Insertion Loss	5	3000	2.0			
CMRR	5	3000	20			
DC resistance				0.59		
Insulation Resistance				10M		
Rated Current					220	
Rated Voltage						20
Withstanding Voltage						50



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5-2 Insertion loss vs. Frequency (Reference)

Tr1 Sds21 Log Mag 500.0mdB/ Ref 0.000dB [F4]



5-3 CMRR(Reference)

Tr3 Sds21/Scs21 Log Mag 10.00dB/ Ref 0.000dB [F4]



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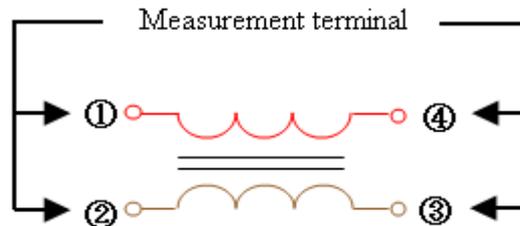
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5-4 Test Equipment

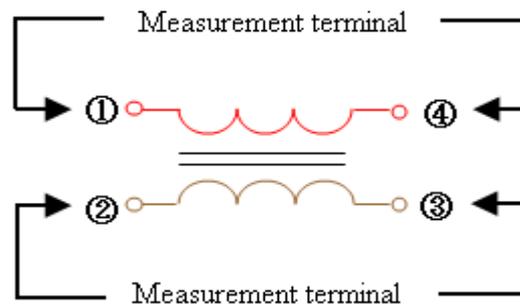
5-4-1 Impedance

Measured by using Agilent E4991A RF Impedance Analyzer.



5-4-2 DC Resistance

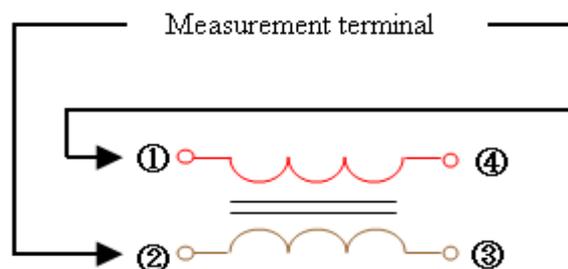
Measured by using Chroma 16502 mill ohm meter.



5-4-3 Insulation Resistance

Measured by using Chroma 19073

Measurement voltage : 50V



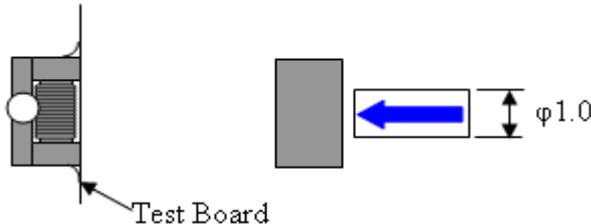
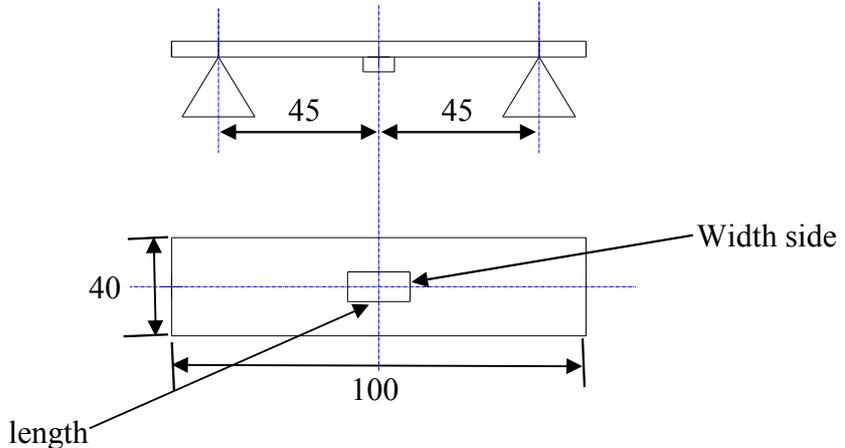
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6. Reliability Test

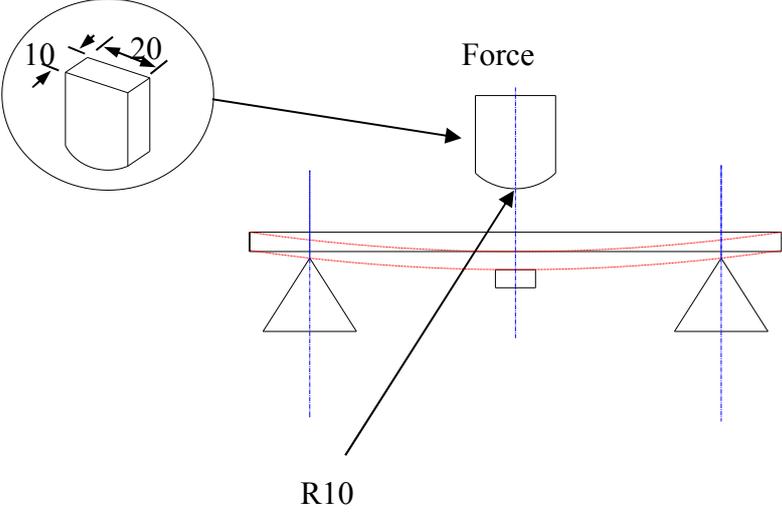
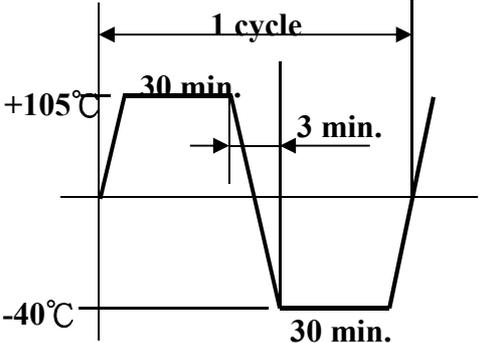
Operating temperature : -40 to +105°C		Storage temp and humidity : 20~25°C 60%RH max.
Item	Specifications	Test conditions
Solder ability	It can be connected on the Recommendation soldering condition.	Apply cream solder to the test circuit board . It is mounted on the recommendation soldering condition.
Terminal strength	The terminal electrode and the ferrite must not be damaged.	Solder a chip to test substrate , and then laterally apply a load 0.5Kg in the arrow direction. 
Strength on PC Board bending	The terminal electrode and the ferrite must not be damaged.	Soldering a chip to a test substrate , bend the substrate by 2mm and then return. 

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Item	Specifications	Test conditions
	 <p style="text-align: right;">Dimensions in mm</p> <p>Test board : Glass base epoxy multilayer board pc board pattern. PC board pattern : Recommended PC board pattern.</p>	
High temperature resistance	Appearance : Ferrite shall not be damaged. Impedance : Within $\pm 20\%$ of the initial value. insulation resistance: $>10(\text{M}\Omega)$ DC resistance : standard value inside.	Temperature : $+105\pm 2^\circ\text{C}$ Applied voltage : Rated voltage Applied current : Rated current Testing time : 50 ± 12 hours Measurement : After placing for 24 hours min.
Humidity resistance		Temperature : $+85\pm 2^\circ\text{C}$ Humidity : 40 to 60%RH Applied current : Rated current Applied voltage : Rated voltage Testing time : 500 ± 12 hours Measurement : After placing for 24 hours min.
Thermal cycle		Temperature : -40°C , $+105^\circ\text{C}$ kept stabilized for 30 minutes each. Cycle : 5 cycle Measurement : After placing for 24 hours min. 

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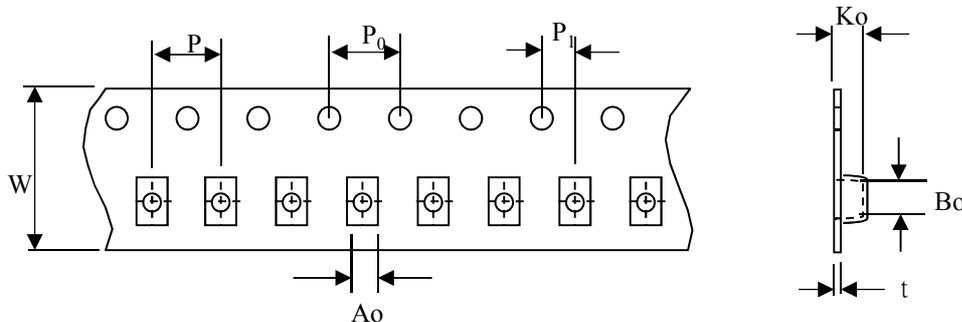


Item	Specifications	Test conditions
Low temperature resistance		Temperature : $-40\pm 2^{\circ}\text{C}$ Testing time : 48 ± 12 hours Measurement : After placing for 24 hours min.
Vibration	Appearance : Ferrite shall not be damaged.	Frequency : 10 to 50 Hz Amplitude : 1.52 mm Dimension and times : X ,Y and Z directions for 2 hours each.

7. Packaging

The packaging must be done not to receive any damage during transporting and storing.

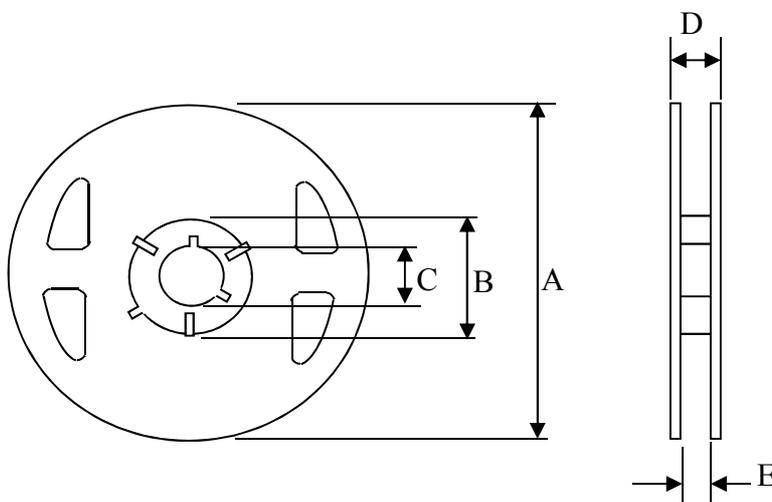
7-1 Tape dimensions



(Dimensions in mm; Tolerance : ± 0.1)

Symbol	W	P	P_0	P_1	A_o	B_o	K_o	t
Dimension	8	4	4	2	1.6	2.42	1.14	0.22

7-2 Reel dimensions



(Dimensions in mm)

Symbol	T
A	180
B	60
C	13
D	14.4
E	8.4

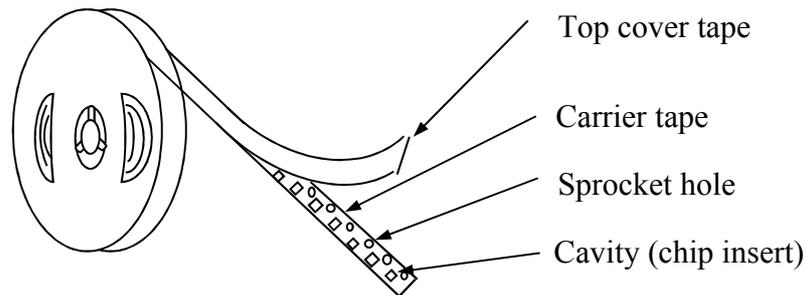
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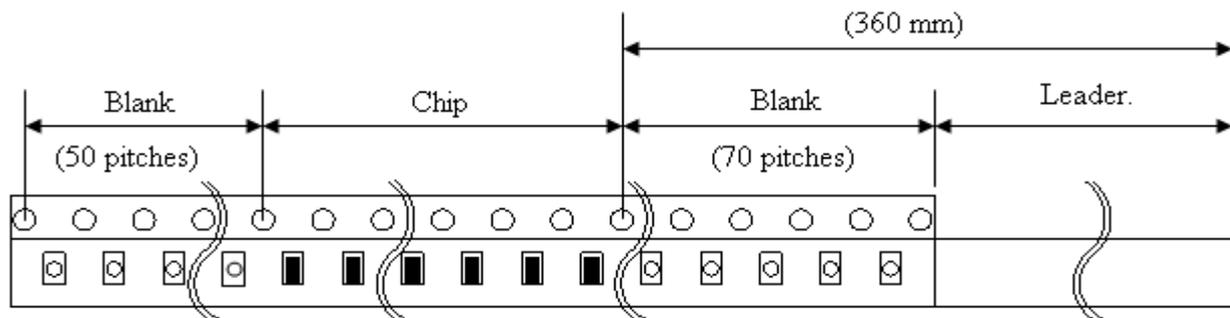


7-3 Tapping figure



7-4 Packaging Form

There shall not continuation more than two vacancies of the product.



Material of carrier tape : Polystyrene

Material of cover tape : Polyester

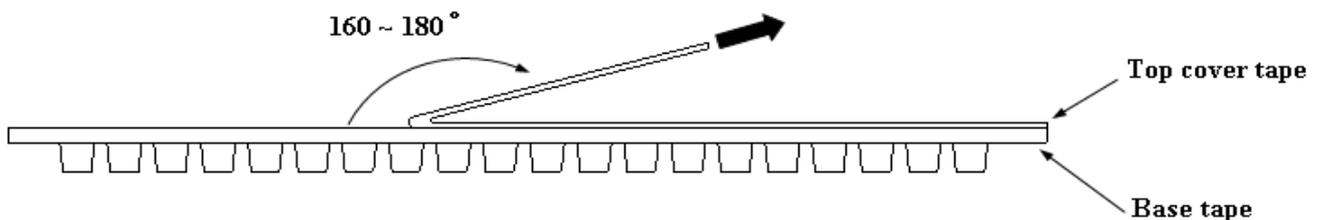
7-5 Cover Tape Peel Strength

The force for tearing off cover tape is 0.05~0.69(N) in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa



7-6 Packing Quantity

φ180 mm reel T type : 2000 pcs./reel

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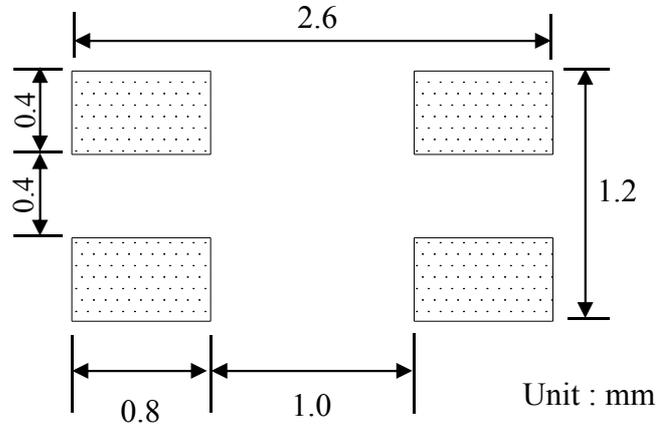
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8. Recommended Soldering Conditions (Please use this product by reflow soldering)

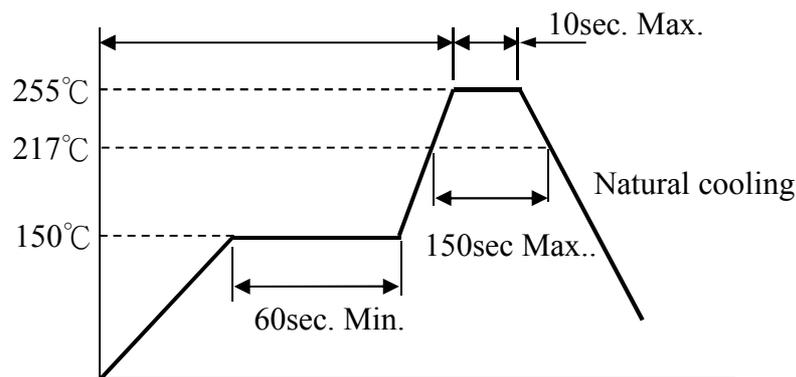
8-1 Recommended Footprint

Termination Number : Please refer to the equivalent circuit in chapter 3.



8-2 Recommended Reflow Pattern

Reflow : until two times.



8-3 Iron Soldering

Use a solder iron of less than 30W when soldering, do not allow the soldering iron tip directly touch the ferrite body outside of terminal electrode.

4 seconds max. at 260°C.

9. Attention in Case of Using

In case of using product ,please avoid following matters:

Splashing water or salt water

Dew condenses

Toxic gas (Hydrogen sulfide, Sulfurous acid ,Chlorine, Ammonia)

Vibrations or shocks which exceed the specified condition

Please be careful for the stress to this product by board flexure or something after the mounting.

10. Other

Recommended wire wound inductors should be used within 6 months from the time of delivery.

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