

## *Data Sheet*

Customer: \_\_\_\_\_

Product: POWER RESISTOR – TR50 Series \_\_\_\_\_

Size : TO-220 \_\_\_\_\_

Issued Date: 30-Nov.-2017 \_\_\_\_\_

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### Record of change

Date	Ver.	Description	Page
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30-Nov.-2017	30-Nov.-2017	30-Nov.-2017	
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## TO-220 Power Resistor (TR50 Series)

### Features

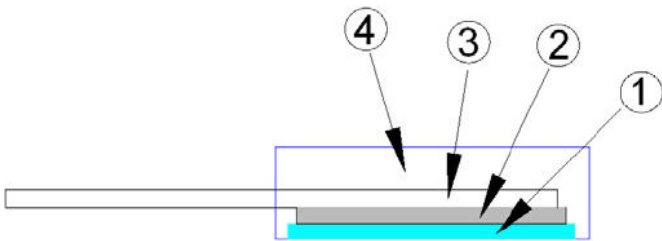
- 50 Watts at 25°C case temperature heat sink mounted
- To-220 style power package
- Molded case for protection and easy to mount
- Electrically isolated case
- Non-Inductive design

### Applications

- Switching Power Supplies
- Non-inductive Design for High Frequency
- Pulsing Applications
- UPS
- Voltage Regulation



### Construction

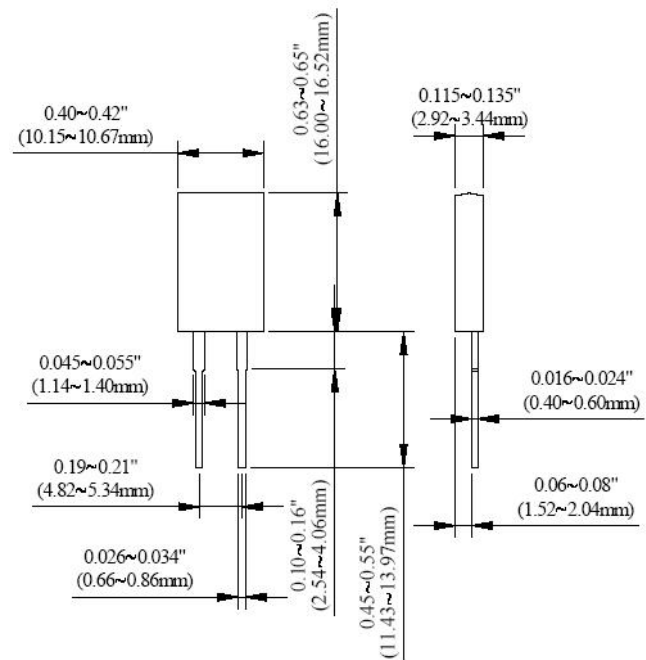


<b>1</b>	<b>Alumina Substrate</b>	<b>3</b>	<b>Lead</b>
<b>2</b>	<b>Resistor Layer</b>	<b>4</b>	<b>Molding</b>

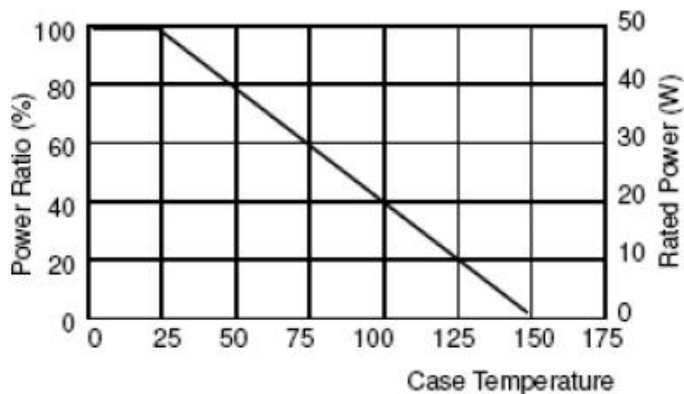
### Dimensions

Unit:mm

Type	Weight(g) (1000pcs)	Packaging
		Tube
TR50	1290	50 pcs



### Derating Curve



## Part Numbering

TR	50	J	U	D	1001
Product Type	Power	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Resistance
	50:50 Watts	D:±0.5% F:±1% J:±5% K:±10%	U: TUBE	D:±50 E:±100 F:±200 G:±300 -:No Specified	R100:0.1Ω 0100:10Ω 4700:470Ω 1001:1000Ω 1002:10000Ω

## Electrical Characteristics Specifications

Item Type	Resistance Range				TCR (PPM/°C)
	±0.5%	±1%	±5%	±10%	
TR50	-	1Ω	0.1Ω -1Ω		No Specified
	-	>1Ω -3Ω			±300
	-	>3Ω -10Ω			±100 ±200
	>10Ω -10KΩ				±50 ±100 ±200

- Operating Voltage: 350V max.
- Dielectric Strength: 1800VAC
- Insulation Resistance: 10GΩmin
- Working Temperature Range:-65°C to +150°C
- Resistance Value<1Ω is available

## Environmental Characteristics

Test Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	Referenced to 25°C, ΔR taken at +105°C
Short Time Overload	ΔR±0.3%	2 times rated power with applied voltage not to exceed 1.5 times Maximum continuous operating voltage for 5 seconds
Load Life	ΔR±1.0%	2,000 hours at rated power
Damp Heat with Load	ΔR±0.5%	40±2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Solder ability	90% min. coverage	245±5°C for 3 seconds
Thermal Shock	ΔR±0.3%	-65°C~150°C, 100 cycles
Thermal Strength	ΔR±0.2%	(Pull Test) 2.4N
Vibration, High Frequency	ΔR±0.2%	20g peak

- Lead Material: Tinned Copper
- Without a Heat Sink, When in Free Air at 25°C, the TR50 is rated for 3W
- The Case Temperature is to be used for the Definition of the Applied Power Limit
- The Case Temperature Measurement must be made with a Thermocouple Contacting the Center of the Component mounted on the Designed Heat Sink.
- Thermal Grease should be Applied Properly