

## *Data Sheet*

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

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

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

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

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### Record of change

Date	Ver.	Description	Page
30-Nov.-2017	1		

### **HITANO ENTERPRISE CORP.**

7F-7, No. 3, Wu Chuan 1<sup>st</sup> Road, New Taipei Industrial Park,

New Taipei City, TAIWAN, R.O.C.

Tel: +886 2 2299 1331 (Rep.)

Fax: +886 2 2298 2466, 2298 2969

Prepared by	Checked by	Approved by	Accepted by (customer)
30-Nov.-2017	30-Nov.-2017	30-Nov.-2017	
<i>Andy Hsu</i>	<i>Hwa Wu</i>	<i>Hwa Wu</i>	

## TO-220 Power Resistor (TR50-H Series)

### ■ Features

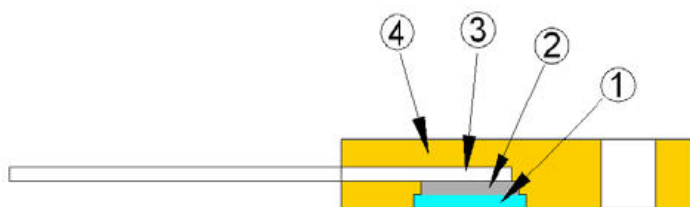
- 50 Watts at  $\leq 25^{\circ}\text{C}$  case temperature heat sink mounted
- To-220 style power package
- Fixed with a M3 screw on system heat sink
- Improve the heat dissipation by ceramic exposure design with external fix jig to mount the chip on heat sink

### ■ Applications

- Power Supplies
- Non-inductive Design for High Frequency
- Pulsing Applications



### ■ Construction



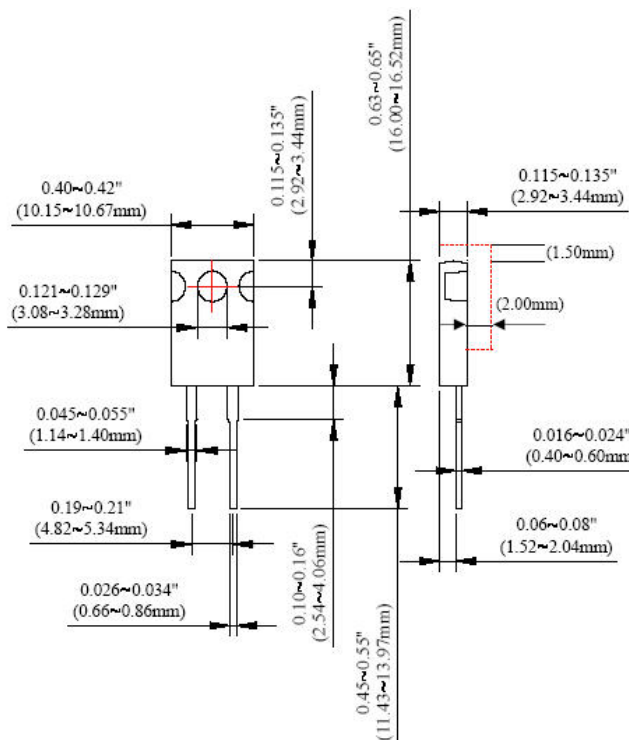
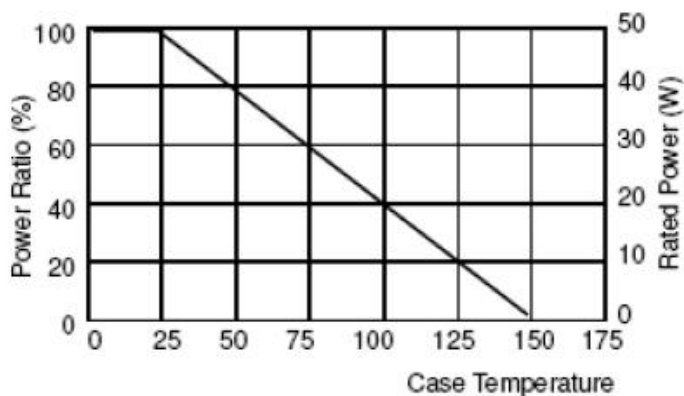
1	Alumina Substrate	3	Lead
2	Resistor Layer	4	Molding

### ■ Dimensions

Unit:mm

Type	Weight(g) (1000pcs)	Packaging
		Tube
TR50-H	2770	50 pcs

### ■ Derating Curve



Remark: --- Compression Washer

## Part Numbering

<b>TR</b>	<b>50</b>	<b>J</b>	<b>U</b>	<b>D</b>	<b>1001</b>	<b>-H</b>
Product Type	Power	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Resistance	Code
	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	H:Hole

## Electrical Characteristics Specifications

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

- Operating Voltage: 420VDC max.
- Dielectric Strength: 1800VAC
- Insulation Resistance: 10GΩmin
- Working Temperature Range:-65°C to +150°C

## 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-H is rated for 2.25W
- 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