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Data Sheet

Customer: _____

Product: TO-220 Power Resistors-TR50-H Series _____

Size.: TR50-H _____

Issued Date: 23-Jun-10 _____

Edition: REV.A _____

TO-220 Power Resistor (TR50-H Series)

Features

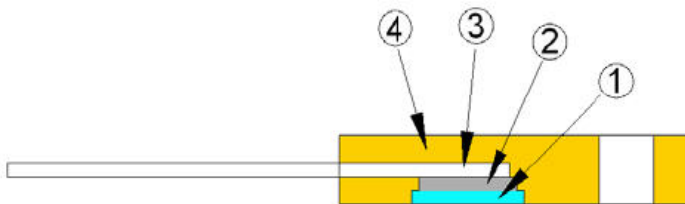
- 50 Watts at $\leq 25^{\circ}\text{C}$ case temperature heat sink mounted
- To-220 style power package
- Fixed with a M3 screw on system heat sink
- Improve the heat dissipation by ceramic exposure design with external fix jig to mount the chip on heat sink

Applications

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



Construction



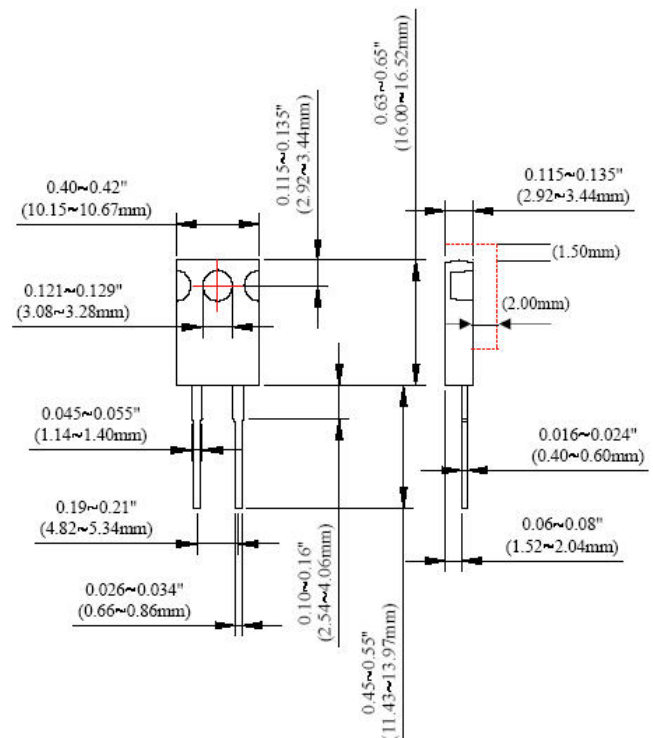
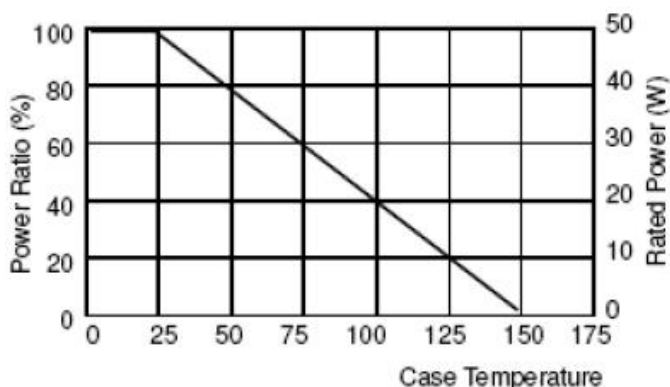
1	Alumina Substrate	3	Lead
2	Resistor Layer	4	Molding

Dimensions

Unit: mm

Type	Weight(g) (1000pcs)
TR50-H	2770

Derating Curve



Part Numbering

TR	50	J	B	D	1001	-H
Product Type	Power	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Resistance	Code
	50:50 Watts	D:±0.5% F:±1% J:±5% K:±10%	B:Bulk	D:±50 E:±100 F:±200 G:±300 -:No Specified	R100:0.1Ω 0100:10Ω 4700:470Ω 1001:1000Ω 2R20:2.2Ω 0080: 8Ω	H:Hole

Electrical Characteristics Specifications

Resistance Range	TCR (PPM/°C)			
	±0.5%	±1%	±5%	±10%
>0.1Ω-1Ω			—	—
>1Ω-3Ω		±300	±300	±300
>3Ω-10Ω		±100 ±200	±100 ±200	±100 ±200
>10Ω-10KΩ	±50 ±100 ±200	±50 ±100 ±200	±50 ±100 ±200	±50 ±100 ±200

Operating Voltage: 420VDC max.

Dielectric Strength: 1800VAC

Insulation Resistance: 10GΩmin

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

Maximum Torque : 0.9N-m

Without a Heat Sink, When in Free Air at 25°C, the TR50 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