

Data Sheet

Customer:

Product: TO-220 Power Resistor – TR50-H Series

Sizes.: TR50-H

Issued Date: 9-Apr-13

Edition: REV.A1



VIKING TECH CORPORATION

光韻科技股份有限公司

No.70, Kuanfu N. Rad.,

Hsin Chu Industrial Park,

Hukou Hsiang, Hsin Chu Hsien,

303, Taiwan

TEL:886-3-5972931

FAX:886-3-5972935•886-3-5973494

E-mail:sales@viking.com.tw

VIKING TECH CORPORATION KAOHSIUNG BRANCH

光韻科技股份有限公司高雄分公司

No.248-3, Sin-Sheng Rd., Cian-Jhen Dist., Kaohsiung,

806, Taiwan

TEL:886-7-8217999

FAX:886-7-8228229

E-mail:sales@viking.com.tw

WUXI TMTEC CO., LTD.

無錫泰銘電子有限公司

No.22 Xixia Road, Machinery & Industry Park,

National Hi-Tech Industrial Development Zone

of Wuxi, Wuxi, Jiangsu Province, China

Zip Code:214028

TEL:86-510-85203339

FAX:86-510-85203667•86-510-85203977

E-mail:china@viking.com.tw

Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
9-Apr-13	9-Apr-13	9-Apr-13	9-Apr-13	
<i>Kris</i>	<i>Ann</i>	<i>Ben</i>		

TO-220 Power Resistor



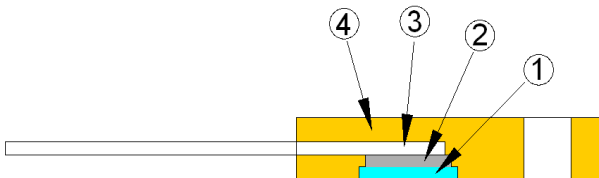
■ Features

- 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

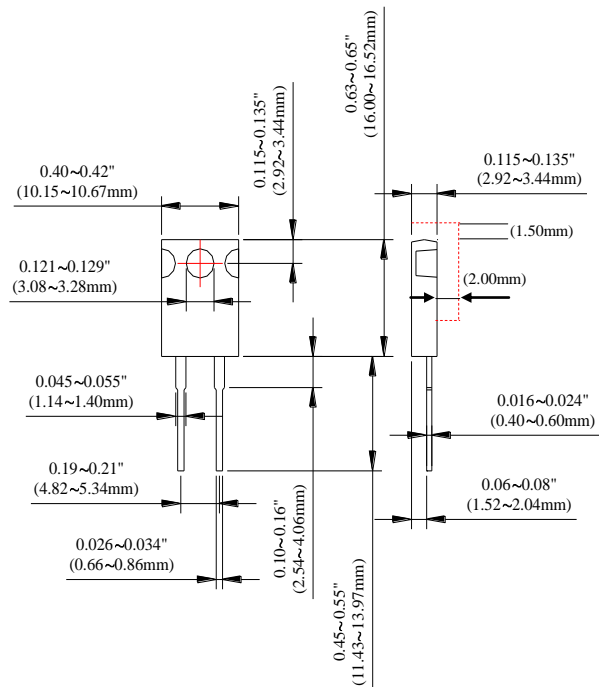


① Alumina Substrate	③ Lead
② Resistor Layer	④ Molding

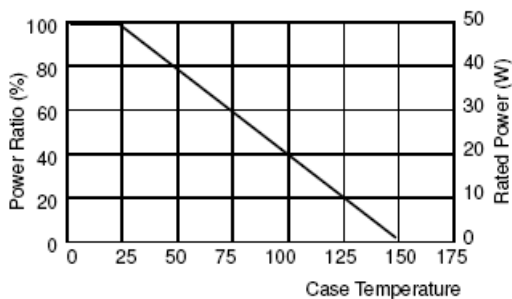
■ Dimensions

Unit : mm

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



■ Derating Curve



TO-220 Power Resistor

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 1002: 10000Ω	H: Hole

Electrical Characteristics Specifications

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

- Operating Voltage: 420V DC Max.
- Dielectric Strength: 1800VAC
- Insulation Resistance: 10GΩ min.

Environmental Characteristics

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., RCWV for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Solderability	90% min. coverage	245±5°C for 3 seconds
Thermal Shock	ΔR±0.3%	-65°C ~150°C, 100 cycles
Terminal Strength	ΔR±0.2%	(Pull Test) 2.4N
Vibration, High Frequency	ΔR±0.2%	20g peak

- Lead Material: Tinned Copper
- Maximum Torque: 0.9 N-m
- 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.

RCWV(Rated continuous working voltage)= $\sqrt{P \cdot R}$ or Max. Operating voltage whichever is lower