

TO-220 Power Resistors – TR35 Series



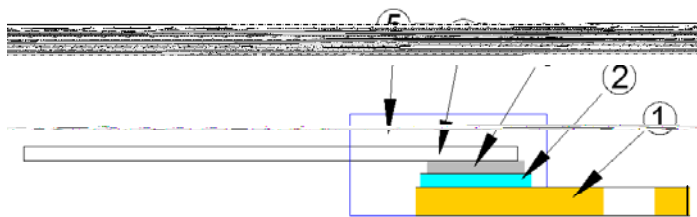
Features

- 35 watts at 25°C case temperature heat sink mounted
- TO-220 style power package
- Single screw mounting to heat sink
- Molded case for protection and easy to mount
- Electrically isolated case
- Non-Inductive design

Applications

- Switching Power Supplies
- Snubbers Circuits
- Automated Machine Controller
- RF Power Amplifiers
- Low Energy Pulse Loading
- UPS
- Voltage Regulation

Construction

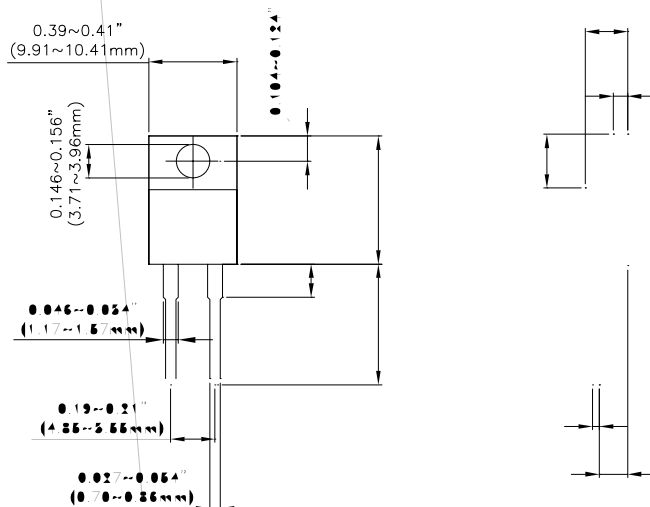
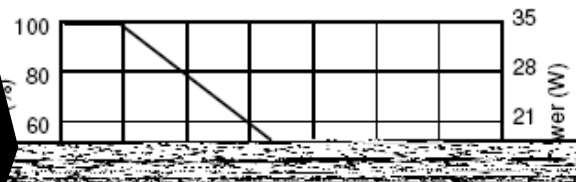


1	Flange	4	Lead
2	Alumina Substrate	5	Molding
3	Resistor Layer		

Dimensions

Type	Weight (g) (1000pcs)
TR35	1902

Derating Curve



# TR35 Series

## TO-220 Power Resistors- 35 Watts

### Part Numbering

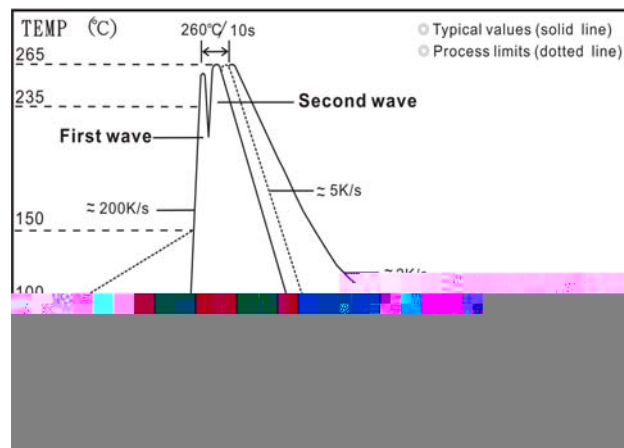
TR	35	J	B	D	1001
Product Type	Power	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Resistance
	35: 35 Watts	D: ±0.5% F: ±1% J: ±5% K: ±10%	B: Bulk D: Tube	D: ±50 E: ±100 F: ±200 G: ±300 - : No Specified	R100: 0.1 0100: 10 4700: 470 1001: 1K 1002: 10K

### Electrical Characteristics Specifications

Item Type	Resistance Range				TCR (PPM/°C)
	±0.5%	±1%	±5%	±10%	
TR35			0.05 -1		No Specified
			>1 -3		±300
			>3 -10		±100 ±200
			>10 -10K		±50 ±100 ±200

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

### Soldering Condition



Wave Soldering (Flow Soldering)

- (1) Time of wave soldering at maximum temperature point 260°C : 10s
- (2) Time of soldering iron at maximum temperature point 410°C : 5s

## TR35 Series

### TO-220 Power Resistors- 35 Watts

#### Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	Referenced to 25°C, $\Delta R$ taken at +105°C
Short Time Overload	$\Delta R \pm 0.3\%$	2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds
Load Life	$\Delta R \pm 1.0\%$	2,000 hours at rated power
Damp Heat with Load	$\Delta R \pm 0.5\%$	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	$\Delta R \pm 0.3\%$	-65°C~150°C, 100 cycles
Terminal Strength	$\Delta R \pm 0.2\%$	(Pull Test) 2.4N
Vibration, High Frequency	$\Delta R \pm 0.2\%$	20g peak

- Lead Material: Tinned Copper
- Maximum Torque: 0.9 N-m
- Without a Heat Sink, When in Free Air at 25°C, the TR35 is Rated for 2.50W
- 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.

**REVISION HISTORY**

<b>REVISION</b>	<b>DATE</b>	<b>CHANGE NOTIFICATION</b>	<b>DESCRIPTION</b>
Version B2	Sep 30,2014	ECN-14017	Product's Dimensions Updated
Version B3	Apr 30,2015	-	- Increase Tube Package Code