Data Sheet

Customer:	
Product:	**TO-247 Power Resistors – TR100 Series**
Sizes.:	**TR100**
Issued Date:	**27-May-25**
Edition:	**REV.B4**

RoHS Compliant

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Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
27-May-25	27-May-25	27-May-25		
Mandy Chang	***Ben Chang***	***Ben Chang***		

TO-247 Power Resistors

■Features

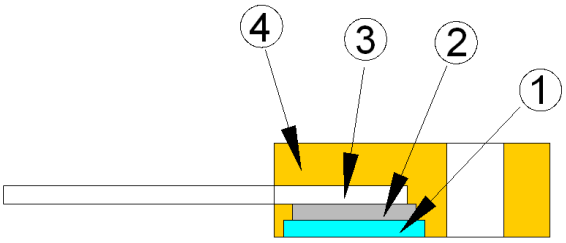
- 100 watts at 25°C case temperature heat sink mounted
- TO-247 style power package
- Single M3 screw mounting to heat sink
- Molded case for protection and easy to mount
- Electrically isolated case
- Non-Inductive design



■Applications

- Gate Resistors in Power Supplies
- Snubbers
- Load and Dumping Resistors in CRT Monitors
- Terminal Resistance in RF Power Amplifiers
- Voltage Regulation
- Low Energy Pulse Loading
- UPS

■Construction

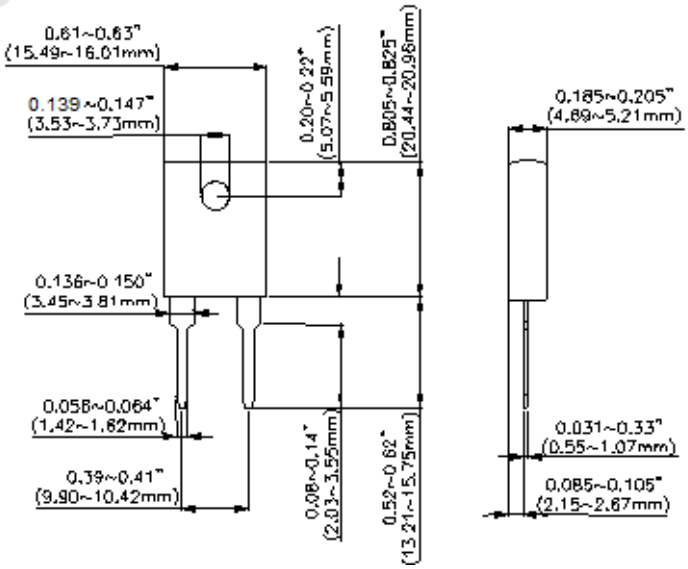


①	Alumina Substrate	③	Lead
②	Resistor Layer	④	Molding

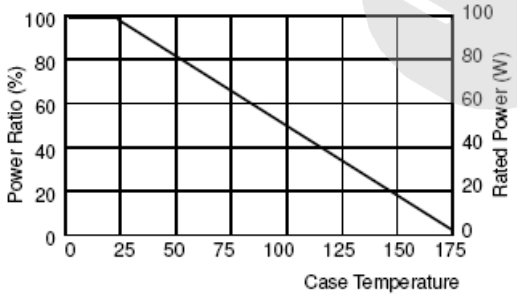
■Dimensions

Unit: mm

Type	Weight (g) (1000pcs)	Packaging Tube
TR100	3381	35pcs



■ Derating Curve



Derating Curve Slope：0.6667W/°K ; Thermal resistance：1.5°K /W

TO-247 Power Resistors

■Part Numbering

TR	100	J	D	D	1001
Product Type	Power	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Resistance
	100: 100 Watts	D: ±0.5% F: ±1% J: ±5% K: ±10%	D: Tube	D: ±50 E: ±100 F: ±200 G: ±300 - : No Specified (±300~±700)	R100: 0.1Ω 0100: 10Ω 4700: 470Ω 1001: 1000Ω 1002: 10000Ω

■Electrical Characteristics Specifications

Item / Type	Resistance Range				TCR (PPM/℃)
	±0.5%	±1%	±5%	±10%	
TR100	-	-	0.05Ω - 0.1Ω		No Specified (±300~±700)
	-	≧ 0.1Ω - 1Ω			±300
	-	≧ 1Ω - 5Ω			±100 ±200 ±300
	≧ 5Ω - 10Ω				±100 ±200 ±300
	≧ 10Ω - 100KΩ				±50 ±100 ±200

- Operating Voltage: 700V Max.
- Dielectric Strength: 2500V AC
- Insulation Resistance: 10GΩ min.
- Operating Temperature Range: -65°C to +175°C

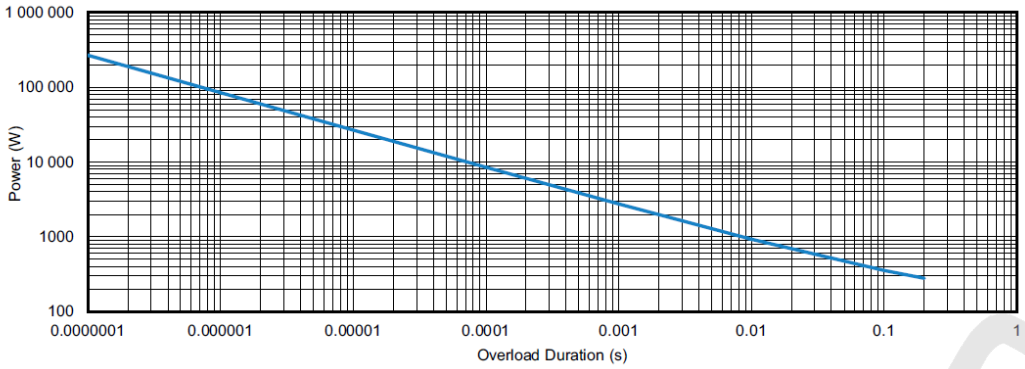
■Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	Referenced to 25°C, ΔR taken at +105°C
Load Life	ΔR±1.0%	Rated power, 2,000 hours
Solderability	90% min. coverage	245±5°C for 3 seconds
Momentary Overload	ΔR±0.3%	1.5 times rated power and V (dc) ≦ 1.5V Max. for 5 seconds
Dielectric strength	ΔR±0.15%	2500V AC, 60 seconds
Moisture resistance	ΔR±0.5%	-10°C ~+65°C, RH>90%, cycle 240 hours
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 Nm
- When in Free Air at 25°C, the TR100 is Rated for 3.5W
- 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
- Storage Temperature: 25±5℃;Humidity: < 75%RH
- Shelf life: 1 years Max

TO-247 Power Resistors

■Power Curve



REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version B1	Mar 31 ,2025		-Add Shelf life.
Version B2	Apr 28 ,2025		-Modify the TCR specification in the Electrical Characteristics Specifications. -Modify the Dielectric Strength 1800VAC to 2500VAC. -Modify the Operating Temperature -65˚C to +175˚C→-55˚C to +175˚C. -Modify the Environmental Characteristics.
Version B3	May 19 ,2025		-Modify the Operating Temperature -55˚C to +175˚C→-65˚C to +175˚C. -Add Power Curve.
Version B4	May 27 ,2025		-Modify the dielectric strength in the Environmental Characteristics from 1800VAC to 2500VAC.