



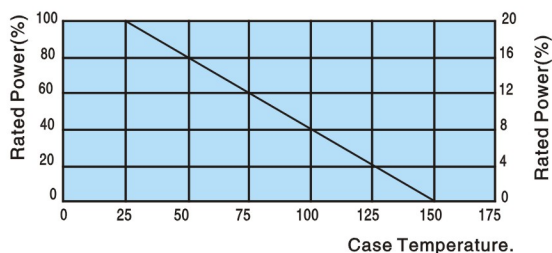
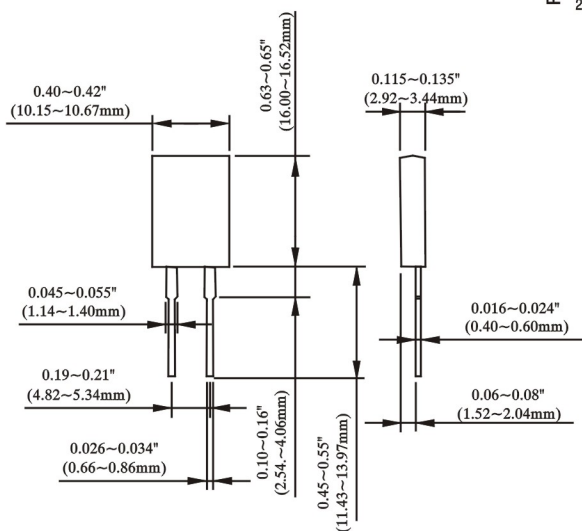
Features:

- 20 Watt at 25°C Case Temperature Heat Sink Mounted
- TO-220 Style Power Package
- Molded Case for Protection and Easy to Mount
- Isolated Case.
- Non Inductive.

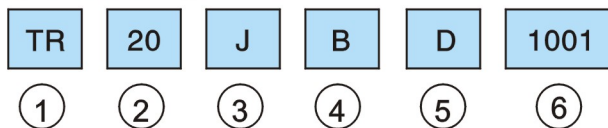
Applications:

- High Speed Switching Power Supplies.
- Snubber Circuits.
- Load Resistor for Pulse Generators.
- Voltage Regulation.
- VHF Amplifiers.

Dimensions



Part Numbering



Product Type

Product Type	
TR	TO-220 Power Resistors

Power

Codes	Power Rating
20	20 Watts

Resistance Tolerance

Codes	Resistance Tolerance
D	±0.5%
F	±1%
G	±2%
J	±5%
K	±10%

Packaging

Code	Type
T	Tube
B	Bulk

TCR

Codes	Type
D	±50PPM/°C
E	±100PPM/°C
F	±200PPM/°C
-	No specified

Resistance

Codes	Type
0R10	0.1Ω
0100	10Ω
4700	470Ω
1001	1000Ω
1002	10000Ω

Electrical Characteristics Specifications

Resistance Range	Resistance Tolerance	TCR(PPM/°C)
0.05Ω~1Ω	± 5.00% ± 10.0%	-
2Ω~5Ω	± 1.00% ± 5.00% ± 10.0%	± 200
5Ω~10Ω	± 1.00% ± 5.00% ± 10.0%	± 100 ± 200
11Ω~10KΩ	± 0.50% ± 1.00% ± 5.00% ± 10.0%	± 50 ± 100 ± 200

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

Environmental Characteristics

Test Item	Specification	Test Method
Temperature Coefficient of Resistance	10Ω and above, ± 50ppm/°C 1Ω and 10Ω,(± 100ppm)/°C	Referenced to 250C, Δ R taken at +1050C
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%	MIL-R-39009, 2,000 hours at rated power.
Humidity (Steady State)	ΔR± 0.5%	MIL-STD-202F,Method 103B 40°C,90~95%RH,RCWV 105hours ON,0.5hours OFF, total 1000~1048 hours.
Thermal Shock	ΔR± 0.3%	MIL-STD-202, Method 107G. -65°C~150°C, 100 cycle.
Terminal Strength	ΔR ± 0.2%	MIL-STD-202, Method 211, Cond. A (Pull Test) 2.4N,
Vibration, High Frequency	ΔR± 0.2%	MIL-STD-202,Method 204,Cond.D,

Lead Material:Tinned Copper
Without a Heat Sink.

When in Free Air at 25°C,the TR20 is Rated for 3W.

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.