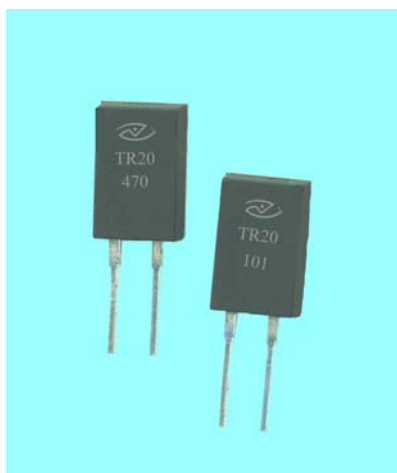


TO-220 Power Resistors- TR20

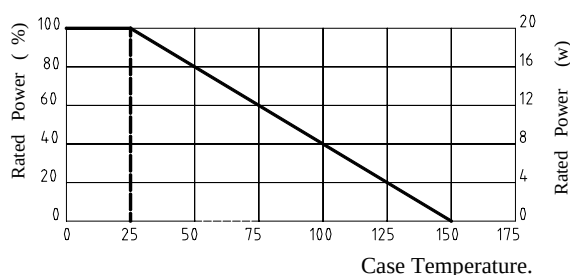


Features:

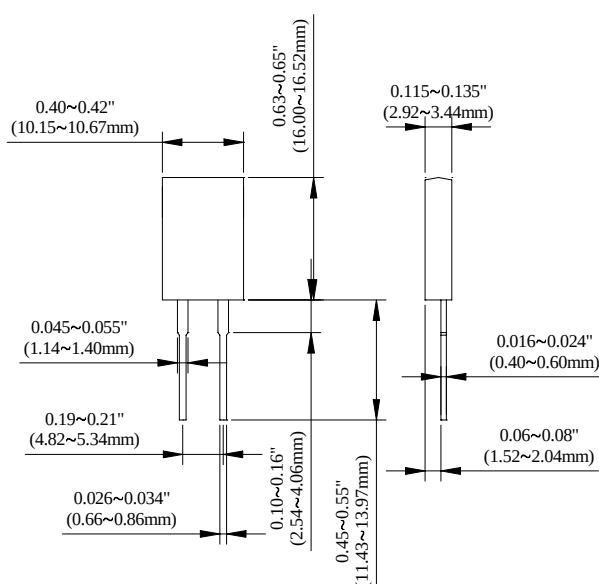
- 20 Watt at 25°C Case Temperature Heat Sink Mounted
- TO-220 Style Power Package
- Molded Case for Protection and Easy to Mount.
- Isolated Case.
- Non Inductive.

Applications:

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



Dimensions



Ordering Information:

TR 20 J T 1001
 (1) (2) (3) (4) (5)

(1)Type: TR=TO-220 Power Resistors

(2)Power : 20=20 Watts:

(3)Tolerance: D=0.5%, F=1%,G=2%,J=5%, K=10%

(4) Packaging Style: T=Tube

(5) Resistance: 0R10=0.1Ω, 0100=10Ω,4700=470Ω, 1001 =1KΩ,1002=10KΩ

Electrical Characteristics Specifications:

Resistance Range	Resistance Tolerance	TCR(PPM/°C)
0.05Ω~10Ω	±1.00%	±100
* 11Ω~10KΩ	±2.00% ±5.00% ±10.0%	±50

*** kareatar is Capable of Manufacturing the Following Options Based on Customer's Requirement:**

- Operating Voltage:350V Max.
- Dielectric Strength: 1800VAC
- Insulation Resistance: 10GΩmin.
- Working Temperature Range:-55°C to +150°C
- Resistance Value< 1Ω is Available
-

Environmental Characteristics:

Test Item	Specification	Test Method
Temperature Coefficient of Resistance	10 Ω .and.above, $\pm 50\text{ppm}/^{\circ}\text{C}$ 1 Ω .and10 Ω , ($\pm 100\text{ppm}+0.002\Omega$)/ $^{\circ}\text{C}$	Referenced to 25 $^{\circ}\text{C}$, ΔR taken at +105 $^{\circ}\text{C}$
Short Time Overload	$\Delta R \pm (0.3\% + 0.001\Omega)$ max.	2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds,
Load Life	$\Delta R \pm (1.0\% + 0.001\Omega)$.	MIL-R-39009, 2,000 hours at rated power.
Moisture Resistance	$\Delta R \pm (0.5\% + 0.001\Omega)$ max.	MIL-STD-202, Method 106,
Thermal Shock	$\Delta R \pm (0.3\% + 0.001\Omega)$ max.	MIL-STD-202, Method 107, Cond. F,
Terminal Strength	$\Delta R \pm (0.2\% + 0.001\Omega)$ max.	MIL-STD-202, Method 211, Cond. A (Pull Test) 2.4N,
Vibration, High Frequency	$\Delta R \pm (0.2\% + 0.001\Omega)$ max.	MIL-STD-202, Method 204, Cond. D,

- Lead Material: Tinned Copper.
- Derating (Thermal Resistance): 0.16W/ $^{\circ}\text{K}$ (6.25 $^{\circ}\text{K}/\text{W}$).
- Without a Heat Sink.
- When in Free Air at 25 $^{\circ}\text{C}$, the TR20 is Rated for 3W.
- Derating for Temp. Above 25 $^{\circ}\text{C}$ is 0.018W/ $^{\circ}\text{K}$
- 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.