

The TAP1000 Series resistors deliver 1000 watts of continuous power with thick film on alumina substrate technology. Up to 30% smaller, the TAP1000 is capable of 2 to 4 times the power dissipation of traditional heat sinkable resistor technologies. Designed for use with liquid cooled heat sinks, TAP1000 resistors are capable of dissipating 1000 watts of continuous power when properly mounted (based on 70°C base temperature).

Offering the highest power available in a heat sinkable package, the TAP1000 is well suited for power conditioning, power distribution, power conversion, and power control applications. Constructed of durable, lightweight materials, the TAP1000 package is easy to design and mount.

FEATURES

- Dissipates 1000 Watts @ 70°C Mounting Plate Temperature
- High Energy Rating
- Low Inductance
- Resistor Element Electrically Isolated
- High Dielectric Strength
- Small Footprint

APPLICATIONS

- Power semiconductor balancing
- Motor control
- Inrush Current Limiting

SPECIFICATIONS

Material

Resistor Element: Thick Film on Alumina Substrate

Electrical

Power Rating: 1000 watt @ 70°C Mounting Plate

Resistance Values: 2.5Ω to 50Ω

Resistance Tolerance: +20% std.

Max Operating Voltage: 2000VDC

Temperature Coefficient: ± 250 PPM/°C

Dielectric Strength: 6KV Standard, up to 12KV available

Operating Temperature Range: -55°C to 150°C

Case

Terminal Screws: #10-32

Max Contacts Torque: 10 in-lb

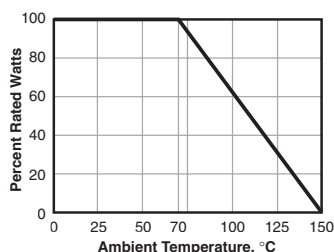
Mounting Screws: #8-32

Max Mounting Torque: 15 in-lb

Creepage Distance: 50mm ± 1mm (min)

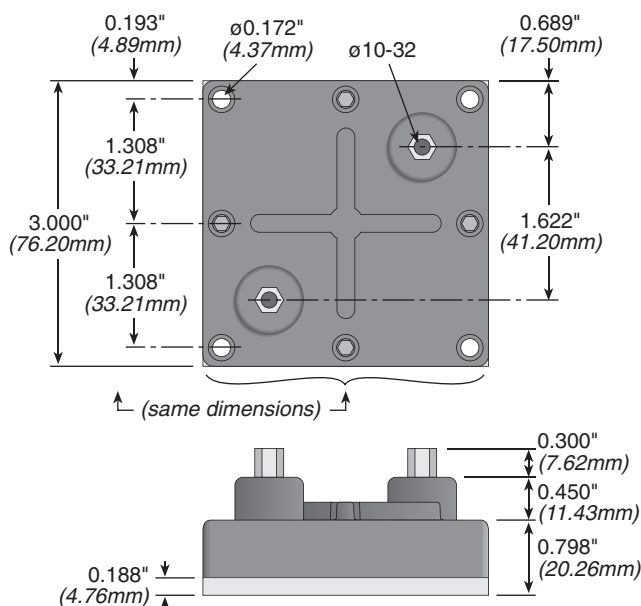
Thermal Resistance: 0.05°C / Watt

DERATING CURVE



TAP1000 Series

1000 Watt Heat Sinkable Planar Resistor



PERFORMANCE DATA

Test	Rating	
	Continuous	Pulse
Operating Voltage	$\sqrt{P \cdot R}$	N/A
Max. Applied Voltage	193V	2000VDC
Max. Current	5.16A	53.33A
Test	Method	Maximum ΔR
Short Time Overload	$1.14 \times \sqrt{P \cdot R} / 10 \text{ sec @ } 70^\circ\text{C}$	Max % ΔR _{sto} = ±(2% + 0.05Ω)
Moisture Resistance	1000 hrs @ 40°C, 90-95% RH	≤1%
Thermal Shock	MIL-STD-202, Method 107	MIL-STD-202, Method 107
Vibration, elec.	MIL-STD-202, Method 201	±2% Resistance
Vibration, mech.	MIL-STD-202, Method 201	No Loose Terminal Screws
Load Life, 1000 Hrs	90 min ON / 30 min OFF	≤1%
Pulse Tolerance	52μF @ 2KV / 60 sec intervals, 104J	≤1%
Dielectric Strength	6KVDC for 1 minute	≤1%

ORDERING INFORMATION

TA1KOPH10R0L

Style Package Type Resistance Tolerance
 1 ohm = 1R00 K = 10% (standard)
 50 ohms = 50R0 L = 20%

STOCK PART NUMBERS

Ohms	Part Number 10% Tolerance	Ohms	Part Number 10% Tolerance
3	TA1KOPH3R00K	15	TA1KOPH15R0K
4	TA1KOPH4R00K	20	TA1KOPH20R0K
5	TA1KOPH5R00K	25	TA1KOPH25R0K
8	TA1KOPH8R00K	30	TA1KOPH30R0K
10	TA1KOPH10R0K	50	TA1KOPH50R0K