TAP1000 Series

1000 Watt Heat Sinkable Planar Resistor

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

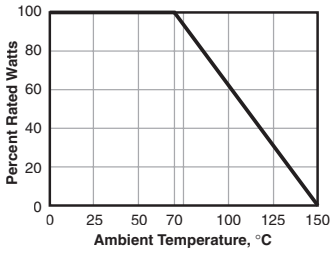
Mounting Screws: #8-32

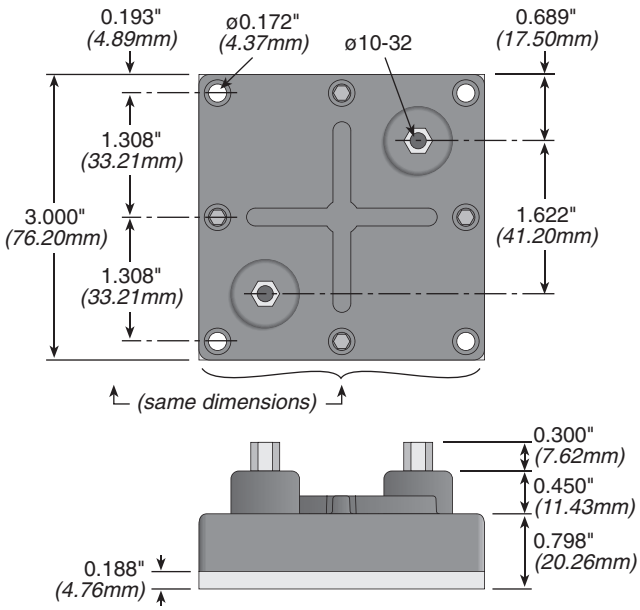
Max Mounting Torque: 15 in-lb

Creepage Distance: 50mm ± 1mm (min)

Thermal Resistance: 0.05°C / Watt

DERATING CURVE





PERFORMANCE DATA

Test	Rating	
	Continuous	**Pulse**
Operating Voltage	$\sqrt{P*R}$	N/A
Max. Applied Voltage	193V	2000VDC
Max. Current	5.16A	53.33A
Test	**Method**	**Maximum ΔR**
Short Time Overload	1.14 x $\sqrt{P*R}$ / 10 sec @ 70°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 20,000 Pulses	52µF @ 2KV / 60 sec intervals, 104J	≤1%
Dielectric Strength	6KVDC for 1 minute	≤1%

ORDERING INFORMATION

TA1K0PH10R0L

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

STOCK PART NUMBERS

Ohms	Part Number 10% Tolerance	Ohms	Part Number 10% Tolerance
3	TA1K0PH3R00K	15	TA1K0PH15R0K
4	TA1K0PH4R00K	20	TA1K0PH20R0K
5	TA1K0PH5R00K	25	TA1K0PH25R0K
8	TA1K0PH8R00K	30	TA1K0PH30R0K
10	TA1K0PH10R0K	50	TA1K0PH50R0K