

# TA1K & TA2K

## High Wattage Heat Sinkable Planar Resistor

The TAP series delivers 1000W or 2000W of continuous power when properly mounted to a liquid cooled heat sink (based on 85°C mounting plate temperature)

Applications include power conditioning, power distribution, power conversion, and power control.



### FEATURES

- High Energy Rating
- Low Inductance
- Resistor Element Electrically Isolated
- High Dielectric Strength
- Small Footprint

### APPLICATIONS

- Power semiconductor balancing
- Motor control
- Inrush Current Limiting

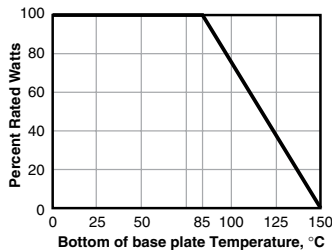
### CHARACTERISTICS

<b>Resistor Element</b>	Thick Film on Alumina Substrate
<b>Power Rating</b>	1000W or 2000W at 85°C mounting plate
<b>Resistance Values</b>	0.5Ω to 1000Ω
<b>Resistance Tolerance</b>	+10% std.
<b>Max Operating Voltage</b>	2000VDC
<b>Temperature Coefficient</b>	± 250 PPM/°C
<b>Dielectric Strength</b>	6KV standard
<b>Operating Temperature Range</b>	-55°C to 85°C
<b>Terminal Screws</b>	#10-32
<b>Max Contacts Torque</b>	10 in-lb
<b>Mounting Screws</b>	#8-32
<b>Max Mounting Torque</b>	15 in-lb
<b>Creepage Distance</b>	50mm ± 1mm (min)

Test	Rating	
	Continuous	Pulse
<b>Rated Power, max. current and heat sink plate temperature limited</b>	(TA1K0) 1000W (TA2K0) 2000W	
<b>Operating Voltage</b>	$\sqrt{P \cdot R}$	N/A
<b>Max. Applied Voltage, ohms law limited</b>	223V	2000VDC
<b>Max. Current</b>	10A	53.33A
<b>Critical Resistance; below this resistance max power has to be de-rated due to exceeding max current</b>	(TA1K0) 10Ω (TA2K0) 20Ω	

Test	Method	Maximum ΔR
<b>Short Time Overload</b>	$1.14 \times \sqrt{P \cdot R} / 10 \text{ sec @ } 70^\circ\text{C}$	Max % ΔRsto = ±(2% + 0.05Ω)
<b>Moisture Resistance</b>	(TA1K0) 1000 hrs @ 40°C, 90-95% RH (TA2K0) 1750 hrs @ 40°C, 90-95% RH	≤1%
<b>Thermal Shock</b>	MIL-STD-202, Method 107	MIL-STD-202, Method 107
<b>Vibration, elec.</b>	MIL-STD-202, Method 201	±2% Resistance
<b>Vibration, mech.</b>	MIL-STD-202, Method 201	No Loose Terminal Screws
<b>Load Life</b>	(TA1K0) 1000 Hrs 90 min ON / 30 min OFF (TA2K0) 1750 Hrs 90 min ON / 30 min OFF	≤1%
<b>Pulse Tolerance</b>	52μF @ 2KV / 60 sec intervals, 104J, 20,000 Pulses	≤1%
<b>Dielectric Strength</b>	6KVDC for 1 minute	≤1%

### Derating



(continued)

