# **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.



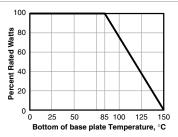
#### **FEATURES**

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

#### CHARACTERISTICS

Resistor Element	Thick Film on Alumina Substrate	
Power Rating	1000W or 2000W at 85°C mounting plate	
Resistance Values	0.5Ω to 1000Ω	
Resistance Tolerance	+10% std.	
Max Operating Voltage	2000VDC	
Temperature Coefficient	± 250 PPM/°C	
Dielectric Strength	6KV standard	
Operating Temperature Range	-55°C to 85°C	
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)	

#### Derating



Test		Ratir Continuous	ng Pulse
Rated Power, m	ax. current and heat sink plate temperature limited	(TA1K0) 1000W (TA2K0) 2000W	
	Operating Voltage	√P*R	N/A
Max. Ap	plied Voltage, ohms law limited	223V	2000VDC
	Max. Current	10A	53.33A
	nce; below this resistance max de-rated due to exceeding max current	(ΤΑ1Κ0) 10Ω (ΤΑ2Κ0) 20Ω	
Test	Method	Max	imum ∆R
Short Time Overload	1.14 x √P*R / 10 sec @ 70°C		% ΔRsto = 6 + 0.05Ω)
Moisture Resistance	(TA1K0) 1000 hrs @ 40°C, 90-95 (TA2K0) 1750 hrs @ 40°C, 90-95		
Thermal Shock	MIL-STD-202, Method 107		STD-202, nod 107

Resistance	(TA2K0) 1750 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	(TA1K0) 1000 Hrs 90 min ON / 30 min OFF (TA2K0) 1750 Hrs 90 min ON / 30 min OFF	≤1% ≤1%
Pulse Tolerance	52µF @ 2KV / 60 sec intervals, 104J, 20,000 Pulses	≤1%
Dielectric Strength	6KVDC for 1 minute	≤1%

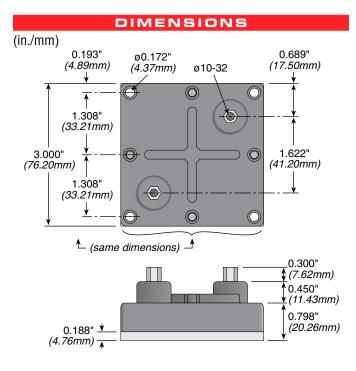
## Сните Тахилерок 1021

#### APPLICATIONS

- · Power semiconductor balancing
- Motor control
- Inrush Current Limiting

# **TA1K & TA2K**

### High Wattage Heat Sinkable Planar Resistor



#### APPLICATION NOTES

Proper heat sinking techniques are essential to performance of a TAP resistor. Pleased follow these guidelines when designing TAP system:

- Heats sink plate (base plate of the resistor) temperature must be monitored to establish proper de-rating. Best technique is to attach a thermocouple to the side of the base plate of the resistor. Temperature of plastic housing or heat sink cannot be used to establish rating of the resistor. Usage of laser thermometers should be avoided.
- To obtain a power rating of 1000W or 2000W, the bottom case temp must not exceed 85°C. This can only be achieved if the thermal conduction to the heatsink Rth-cs<0.025°K/W. This value can be reached by using thermal transfer compound with a heat conductivity of 1W/mK. The flatness of the cooling plate must be better than 0.05mm overall. The roughness of the surface should not exceed 6.4µm.
- Due to very high power density, only liquid cooled heat sinks are recommended for applications when >300W power rating is desired.
- Properly designed heat sink should have more than 2 cooling pipes under the surface of the TAP resistor. The Ohmite CP4 heat sink (https://www.ohmite.com/cp4-series-chillplate/) is an example of properly designed heat sink.

#### ORDERING INFORMATION

rd Part Numbers

			Ro	HS Compliant	Standa	
TA	<u>1 K</u>	<u>0 P F</u>	<u>12R5</u>	<u>0</u> K E	Ohms	
l Style	l Wattage	I Package Type	I Resistance 2.5Ω = 2R50 50Ω = 50R0	K = 10% (standard)	0.5 1 2.5	
			5012 - 50110	L - 20 /0	5 7.5	
					10	

Stalluaru Fart Nullingis				
Ohms	1000 Watt 10% Tolerance	Ohms	2000 Watt 10% Tolerance	
0.5 1 2.5 5	TA1K0PHR500KE TA1K0PH1R00KE TA1K0PH2R50KE TA1K0PH5R00KE	0.5 1 2.5 5	TA2K0PHR500KE TA2K0PH1R00KE TA2K0PH2R50KE TA2K0PH5R00KE	
7.5	TA1K0PH7R50KE	7.5	TA2K0PH7R50KE TA2K0PH10R0KE	
15 25 50	TA1K0PH10R0KE TA1K0PH15R0KE TA1K0PH25R0KE TA1K0PH50R0KE	15 25 50	TA2K0PH10H0KE TA2K0PH15R0KE TA2K0PH25R0KE TA2K0PH50R0KE	
100	TA1K0PH100RKE	100	TA2K0PH100RKE	
250 500 750 1000	TA1K0PH250RKE TA1K0PH500RKE TA1K0PH750RKE TA1K0PH1K00KE	250 500 750 1000	TA2K0PH250RKE TA2K0PH500RKE TA2K0PH750RKE TA2K0PH1K00KE	



rev 6/20-1

## **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Planar Resistors - Chassis Mount category:

Click to view products by Ohmite manufacturer:

Other Similar products are found below :

20-100RP BAB326622R0KE BDS2A10033RK TAP800K68RE BB326610R0KE TL88J136C BA416775R0KE TL122KU221RE TGHDV100RJE TL71F9K40C FPA100 47K J RCEC750HV6802JB TAP650J4R7E TGHHV100RJE TGHHV33R0JE TGHHV500RJE TGHHV5K00JE TGHHV5R00JE TGHHV680RJE TGHLV100RJE TGHLV150RJE TGHLV1K00JE TGHLV1R00JE TGHLV500RJE TGHLV5K00JE TGHLVR100JE HTS-14-12-40-3/4.8 HTS-14-24-40-3/4.8 HTS-15-230-100-1 HTS-15-230-100-3/4.8 HTS-15-230-100-3/6.3 HTS-15-230-150-3/6.3 FPA100 100R J FPA100 1K5 J FPA100 3R3 J FPA100 4R7 J LPS0600HR400KB LPS0800L1001KB GBR-605-230-20-1 GBR-605-230-60-2 GBR-612-12-40-1 GBR-612-24-40-1 GBR-618-24-10-2 GBR-618-24-5-2 GBR-618-3-5-2 GBR-618-9-5-2 GBR-619-230-60-2 FPA100-1RJ FPA100 470R J HTS-14-230-100-3/4.8