

# TP Series

## High Energy Thick Film on Alumina Substrate

TP Series high energy resistors offer the user the benefits of non-inductive performance and high power density. As an added feature, they provide the impulse energy capability normally associated with wirewound or composition resistors. Double-sided screen printing of pulse-tolerant thick film ink, coupled with a sophisticated scan-cut laser trimming process, maximize the energy withstanding capabilities of the TP Series.



### FEATURES

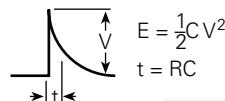
- High-Temp Terminal Construction
- Wide Resistance Range
- Low Inductance (50nH-100nH)
- High Power Density
- Easy to install. PC-mountable



### CHARACTERISTICS

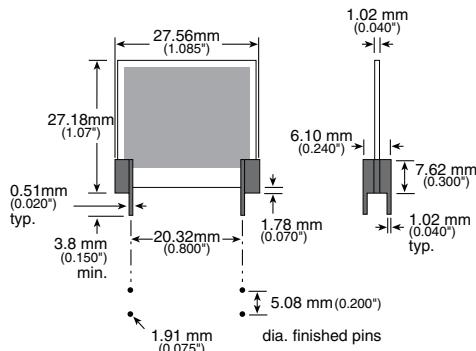
<b>Substrate</b>	Alumina
<b>Resistor</b>	Thick Film
<b>Coating</b>	Glass
<b>Terminals</b>	Solder Plated Phosphor Bronze
<b>Thermal Conductivity</b>	20 Watts/Meter/°C
<b>Temperature Coefficient</b>	1 to 100Ω: 100 ppm/°C 101Ω and up: 50 ppm/°C
<b>Tolerance</b>	±1%, ±5% and ±10%
<b>Power Rating</b>	Based on 25°C free air
<b>Resistance Range</b>	10 ohms to 1M ohm. Consult factory for other values
<b>Maximum Operating Voltage</b>	350 VAC, 500 VDC through glass
<b>Energy Rating</b>	100J: 100ms pulse with 100uF capacitor, not to exceed 1500 volts
<b>Derating</b>	100% @ 25°C to 0% @ 180°C ambient.

### Pulse



$E = \frac{1}{2} C V^2$   
 $t = RC$   
 E = Energy (joules)  
 t = Time (seconds)  
 V = Voltage (volts)  
 R = Resistance (ohms)  
 C = Capacitance (farads)

±.508mm/(.020 in.)



### DIMENSIONS

### ORDERING INFORMATION

#### Standard part numbers for TP series

TP810PW10R0JE  
 TP810PW20R0JE  
 TP810PW50R0JE  
 TP810PW100RJE  
 TP810PW470RJE  
 TP810PW1K00JE  
 TP810PW4K70JE  
 TP810PW10K0JE

Pin spacing  
 8 = 0.80"  
  
**TP 8 1 0 P W 4 K 5 0 J E**  
 Series      Power Rating      Package      Resistance Value (Ω)  
 10 = 10 watts      PW = wraparound terminal      10R0 = 10.0  
 2K00 = 2,000      45K0 = 45,000