

# 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, 1000 VAC, 1500 VDC through substrate
<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

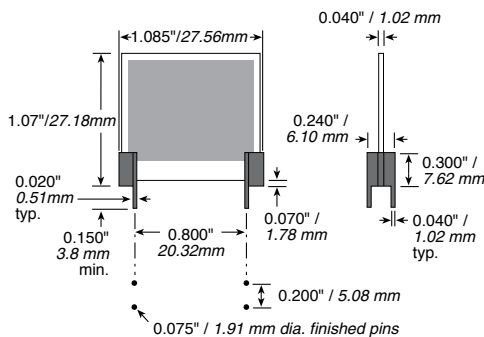
$$E = \frac{1}{2} CV^2$$

$$t = RC$$

E = Energy (joules)  
t = Time (seconds)  
V = Voltage (volts)  
R = Resistance (ohms)  
C = Capacitance (farads)

### DIMENSIONS

(±.020 in. / ±.508mm)



### ORDERING INFORMATION

Pin spacing 8 = 0.80"		Tolerance K = 10% J = 5%		RoHS compliant
<b>TP</b>	<b>810PW4K50JE</b>			
Series	Power Rating 10 = 10 watts	Package PW = wraparound terminal	Resistance Value (Ω) 10R0 = 10.0 2K00 = 2,000 45K0 = 45,000	

### Standard part numbers for TP series

TP810PW10R0JE  
TP810PW20R0JE  
TP810PW50R0JE  
TP810PW100RJE  
TP810PW470RJE  
TP810PW1K00JE  
TP810PW4K70JE  
TP810PW10K0JE