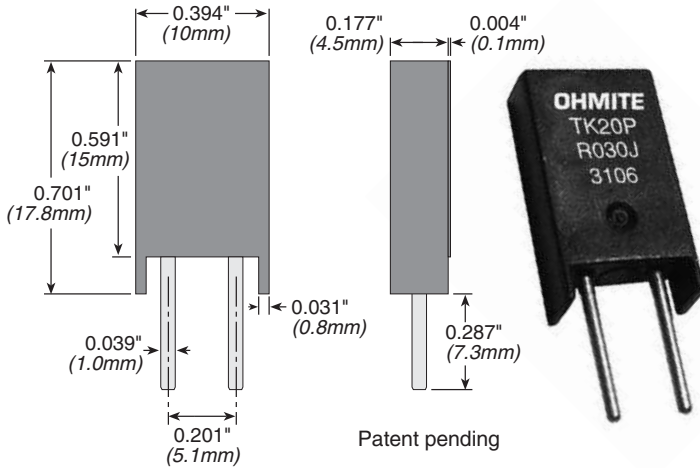


# TK/TN Series

## 20 and 15 Watt TO-220 Package Thick and Thin Film



Ohmite is proud to introduce the newest addition to our family of Heat Sinkable Power Resistors. The TK/TN Series offers 3 major advances over existing TO-220 products:

- Low Resistance Values down to 0.03 ohms for current sense applications
- Low Cost
- Thin Film Construction is the first Thin Film power resistor in heatsinkable packaging on the market.

### WHY THIN FILM?

Thin film technology offers the following performance advantages:

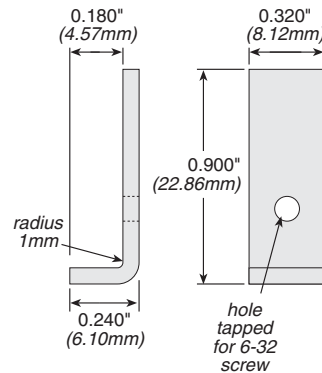
- Extremely stable (low TCR)
- Low Noise (parasitic capacitance and resistance)
- Excellent High Frequency Performance
- High Accuracy (tight tolerances)



TK/TN mounted vertically

### BRACKET

6200E: recommended mounting bracket kit (optional)



### SPECIFICATIONS

#### Material

**Resistive element:** Thick or thin film chip resistor

**Terminals:** Tin plated copper (100Sn)

**Case:** Ryton

**Heatsink plate:** Black anodized aluminum

Electrical	Thick film TK20	Thin film TN15
<b>Power rating:</b>	20W	15W
(Heat-sink dependent; must be attached to a proper heat sink for full power rating. Max. case temp. cannot exceed 150°C.)		
<b>Derating:</b>	Linear, 100% at 25°C to 0% at 150°C	
<b>Resistance Range:</b>	10mΩ-10KΩ	4Ω-10KΩ
<b>Tolerance:</b>	5%	1%, 2%
<b>Max. working voltage:</b>	0.01Ω-1KΩ:	$\sqrt{20 \cdot R}$
	3KΩ-10KΩ:	150V
		200V
<b>Max. working current:</b>	0.01Ω-0.1Ω:	10A
	0.3Ω-10KΩ:	$\sqrt{20/R}$
	4Ω-10KΩ:	$\sqrt{15/R}$
<b>TCR:</b>	0.01Ω-0.1Ω:	±300ppm
	0.3Ω-10KΩ:	±200ppm
	4Ω-10KΩ:	±50ppm (lower available)
<b>Thermal resistance. R<sub>th</sub>:</b>	<6.25°C/W	<8.33°C/W

### STANDARD PART NUMBERS

Ohms	TK20 thick film 20 watt		TN15 thin film 15 watt	
	5% tol.	1% tol.	2% tol.	
0.03	TK20PR030JE			
0.04	TK20PR040JE			
0.05	TK20PR050JE			
0.075	TK20PR075JE			
0.1	TK20PR100JE			
0.3	TK20PR300JE			
0.4	TK20PR400JE			
0.5	TK20PR500JE			
0.75	TK20PR750JE			
1	TK20P1R00JE			
3	TK20P3R00JE			
4	TK20P4R00JE	TN15P4R00FE		
5	TK20P5R00JE	TN15P5R00FE		
7.5	TK20P7R50JE	TN15P7R50FE		
10	TK20P10R0JE		TN15P10R0GE	
30	TK20P30R0JE	TN15P30R0FE		
40	TK20P40R0JE	TN15P40R0FE		
50	TK20P50R0JE	TN15P50R0FE		
75	TK20P75R0JE	TN15P75R0FE		
100	TK20P100RJE		TN15P100RGE	
300	TK20P300RJE	TN15P300RFE		
400	TK20P400RJE	TN15P400RFE		
500	TK20P500RJE	TN15P500RFE		
750	TK20P750RJE	TN15P750RFE		
1000	TK20P1K00JE		TN15P1K00GE	
3000	TK20P3K00JE	TN15P3K00FE		
4000	TK20P4K00JE	TN15P4K00FE		
5000	TK20P5K00JE	TN15P5K00FE		
7500	TK20P7K50JE	TN15P7K50FE		
10,000	TK20P10K0JE		TN15P10K0GE	

### THIS PRODUCT IS DESIGNED FOR USE WITH PROPER HEATSINKING.

Maximum base plate temperature of the resistor must be monitored and kept within specified limits to establish the power 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.

### ORDERING INFORMATION

**TK20P1R00JE**

Series	TCR	Resistance	Tolerance	RoHS
TK20 = 20W thick film TN15 = 15W thin film	(TN15 only) P = ±50ppm L = ±25ppm V = ±10ppm X = ±5ppm	Example: R075 = 75mΩ 7R50 = 7.5Ω 75R0 = 75Ω 7K50 = 7500Ω	F = 1% G = 2% J = 5%	Compliant