

TAH Series

20 Watt TO220 Package Thick Film Power



The TAH20 is a completely encapsulated thick film resistor in the TO220 package outline. Rated for 20 watts @ 25°C case temperature, these resistors are electrically isolated, and molded in a high temperature case.

Designed for heat sink mounting, the symmetrical package is ready for use with snap-on style heat sinks (we recommend use of thermal grease). The TAH20 Series has very low inductance, and available in a wide range of resistance values in standard 5% tolerance. 1% tolerance available by special order.

FEATURES

- 20 Watt Power Rating at 25°C Case Temperature
- High Pulse Tolerant Design
- Quick-snap Molded Package
- Very Low Inductance Design
- Resistor Package Electrically Isolated from Heat Sink
- Low Thermal Resistance to Heat Sink @ $R_{TH} < 6.25^\circ\text{C/W}$
- Tube Packaging Available

APPLICATIONS

- Frequency Conversion
- High Frequency Balancing
- Snubbers

CHARACTERISTICS

Resistance Range	0.05Ω to 10KΩ, other values available upon request
Tolerance	<0.1Ω: 5% only 0.1Ω-1MΩ: 5% std.; 1% available
Temperature Coefficient	Referenced to 25°C, ΔR taken at +105°C; 1 to 10Ω: ±(100ppm+0.002Ω)/°C 10Ω & up: ±50ppm/°C
Max Operating Voltage	350V
Dielectric Strength	1,800 VAC
Power Rating	20W @ 25°C case temperature; see derating curve, below
Insulation Resistance	10GΩ min.
Momentary Overload	2x rated power for 5 seconds where applied voltage ≤1.5 times max. operating voltage. ΔR ±(0.3% + 0.001Ω) max.
Case Material	KMC-125 epoxy
Terminal Material	Copper
Terminal Plating	Lead Free Solder (97% Tin, 3% Silver)
Mounting	Requires the use of a snap-on style heat sink. A thermal compound should be properly applied.
Solder Process	The TAH20 cannot exceed 260°C for more than 10 seconds during soldering process.

Load Life	MIL-R-39009, 2000 Hours @ Rated Pwr	ΔR = ±(1.0% + 0.001) Ω
Thermal Shock	MIL-R-STD-202, Method 107, Cond. F	ΔR = ±(0.3% + 0.001) Ω max
High Freq Vibration	MIL-R-STD-202, Method 204, Cond. D	ΔR = ±(0.2% + 0.001) Ω max
Terminal Strength	MIL-R-STD-202, Method 211, Cond. A (Pull Test) 2.4N	ΔR = ±(0.2% + 0.001) Ω max
Moisture Resistance	MIL-R-STD-202, Method 106	ΔR = ±(0.5% + 0.01) Ω max

Derating



(continued)

