

TDH Series



35 Watt D2PAK Package Thick Film Power Surface Mount

Ohmite's TDH resistor is an economical solution to intermediate power application design requirements. TDH's reliable thick film on alumina substrate construction can be easily heat sunked for higher power performance. TDH resistors are ideal for pulse-loading, pre-charge, bleeder, and snubber applications.



FEATURES

- 35 Watt power rating at 25°C
- SMD - D2PAK package configuration
- Heat resistance to cooling plate: $R_{th} < 4.28^{\circ}\text{C/W}$
- A molded case for environmental protection.
- Resistor element is electrically insulated from the metal sink tab.

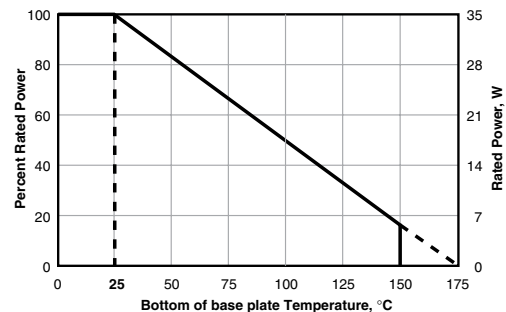
CHARACTERISTICS

Terminal	Copper
Terminal Plating	Terminals- SnAg, Thermal Header- German Silver/Nickel Silver
Resistance Range	0.05Ω to 10KΩ other values on request
Tolerance	±1% to ±10% (0.5% on request)
Max. Operating Voltage	350V
Insulation Resistance	10GΩ min.
Power Rating	Depends upon case temperature. See derating curve. D2PAK style power package for surface mounting applications; 35W power rating at 25°C case temperature.
Working Temperature Range	-55°C to +175°C
Solder Process	The TDH35P cannot exceed 215°C (260°C for the TDH35H) for more than 10 seconds during soldering process.
Derating	100% @ 25°C to 0% @ 150°C curve referenced to case temperature
Dielectric Strength	1,800VAC
Operating Temperature Range	-55°C to +150°C
Temperature Coefficient	Referenced to 25°C, ΔR taken at +105°C 10Ω and above: ±50 ppm/°C For under 10Ω: 3R to 9R9: 100ppm 1R to 2R9: 300ppm 0R1 to 0R99: 700ppm 0R05 to 0R09: 1000ppm
Inductance	less than 20 nanohenries
Flatness	less than 0.1mm tolerance

Soldering note: During surface mount soldering the soldering temperature profile must not cause the metal tab of this device to exceed 220°C (260°C for the TDH35H)!

Test	Condition	Result
Load Life	MIL-R-39009, 2,000 hours	ΔR ±(1.0% +0.01Ω)
Moisture Resistance	MIL-Std-202, Method 106	ΔR =(0.5% +0.01Ω) max.
Short Time Overload	2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds	ΔR ±(0.3% +0.01Ω) max.
Thermal Shock	MIL-Std-202, Method 107, Cond. F	ΔR =(0.3% +0.01Ω) max.
Terminal Strength	MIL-Std-202, Method 211, Cond. A (Pull Test) 2.4N	ΔR =(0.2% +0.01Ω) max.
Vibration, High Frequency	MIL-Std-202, Method 204, Cond. D	ΔR =(0.2% +0.01Ω) max.

Derating



Derating (thermal resistance): 0.23W/°C (4.28°C/W). The case temperature is to be used for purposes of establishing the applied power limit. The case temperature measurement must be made with a thermocouple contacting the center of the component mounted on the designed heat sink. Thermal grease should be applied properly.

(continued)

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