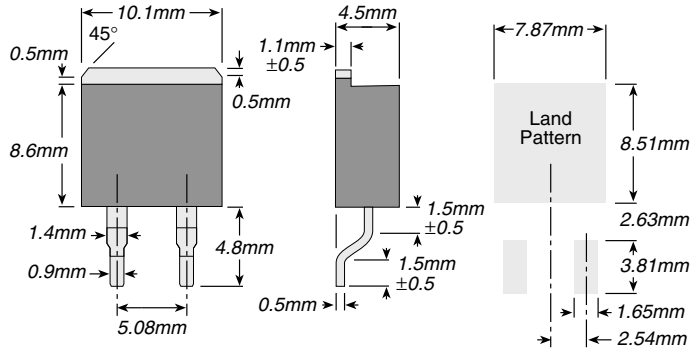
TDH Series

35 Watt TO220 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 sinked for higher power performance. TDH resistors are ideal for pulse-loading, pre-charge, bleeder, and snubber applications.



TO220 style power package for surface mounting applications; 35W power rating at 25°C case temperature

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)!

FEATURES

- 35 Watt power rating at 25°C
- SMD - TO220 package configuration
- Heat resistance to cooling plate: R_{th} <4.28°C/W
- A molded case for environmental protection.
- Resistor element is electrically insulated from the metal sink tab.

SPECIFICATIONS

Material

Terminal: Copper

Terminal Plating: Lead Free Solder (97% Tin, 3% Silver)

Electrical

Resistance Range: 0.1Ω 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.

Working Temperature Range: -55°C to +175°C

Solder Process: The TDH35P cannot exceed 220°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

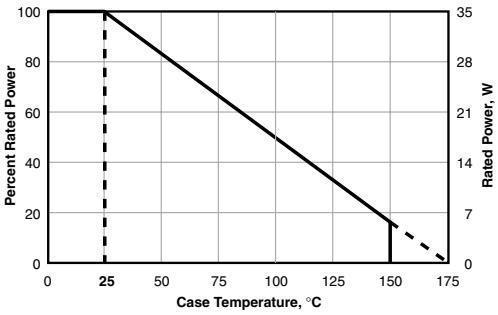
Operating Temperature Range: -55°C to +150°C

Temperature Coefficient: 10Ω and above, ±50ppm/°C, referenced to 25°C, ΔR taken at +105°C. Between 1Ω and 10Ω, ±(100ppm+0.002Ω)/°C, referenced to 25°C, ΔR taken at +105°C.

TEST DATA

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 211, cond. A (pull test) 2.4N)	ΔR =(0.2% + 0.01Ω) max.

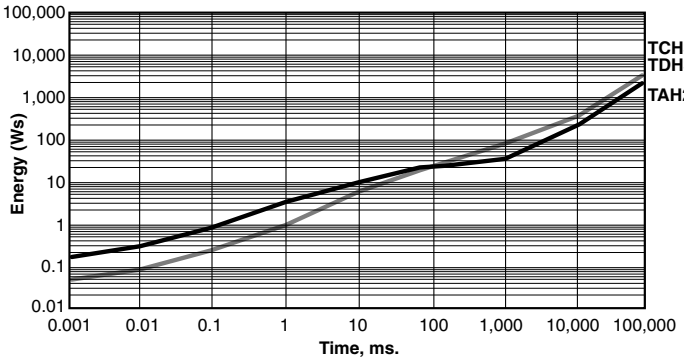
DERATING



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 propperly.

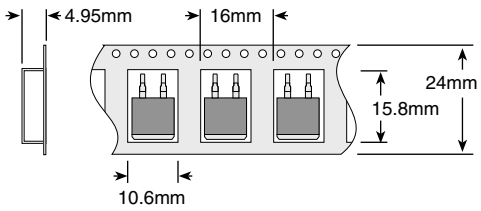
PULSE-FORM

E-function, time between two pulses: 1 sec.



TAPE DIMENSIONS

750 pc./reel



ORDERING INFORMATION

T D H 3 5 P R 1 0 0 J E - TR

Tape and reel (optional) 750 per reel

Style	Package Modifier	Ohms	Tolerance	RoHS Compliant
	P = low temp. H = high temp.	R = Decimal Example: R100= 0.10 1R00= 1.0 10K0= 10,000	F = 1% J = 5% K = 10%	Non-compliant version unavailable

Check product availability at **www.ohmite.com**

STANDARD PART NUMBERS FOR TDH SERIES

Ohms	Part Number 5% Tolerance
0.10	TDH35PR100JE
0.15	TDH35PR150JE
0.20	TDH35PR200JE
0.25	TDH35PR250JE
0.30	TDH35PR300JE
0.36	TDH35PR360JE
0.47	TDH35PR470JE
0.50	TDH35PR500JE
0.75	TDH35PR750JE
1.0	TDH35P1R00JE
2.0	TDH35P2R00JE
3.0	TDH35P3R00JE
5.0	TDH35P5R00JE
7.5	TDH35P7R50JE
10	TDH35P10R0JE
15	TDH35P15R0JE
20	TDH35P20R0JE
25	TDH35P25R0JE
33	TDH35P33R0JE
39	TDH35P39R0JE
47	TDH35P47R0JE
68	TDH35P68R0JE
75	TDH35P75R0JE
100	TDH35P100RJE
150	TDH35P150RJE
200	TDH35P200RJE
250	TDH35P250RJE
300	TDH35P300RJE
500	TDH35P500RJE
750	TDH35P750RJE
1000	TDH35P1K00JE
1500	TDH35P1K50JE
2500	TDH35P2K50JE
3000	TDH35P3K00JE
5000	TDH35P5K00JE