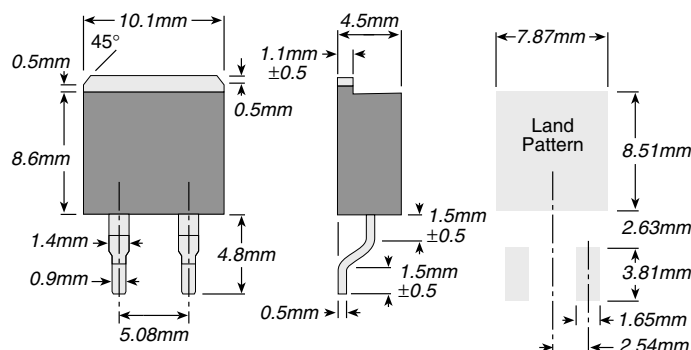


TDH35 Series



T0220 35 Watt Thick Film Power Resistors for Surface Mount, Including Metal Tab RoHS Compliant



T0220 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)!

PERFORMANCE CHARACTERISTICS

Derating	100% @ 25°C to 0% @ 150°C curve referenced to case temperature
Dielectric Strength	1,800VAC
Max. Mounting Torque	0.9Nm
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.

ORDERING INFORMATION

T D H 3 5 P R 1 0 0 J E - T				Tape and reel (optional) 750 per reel
Style	Package Modifier P = low temp. H = high temp.	Ohms R = Decimal Example: R100 = 0.10 1R00 = 1.0 10K0 = 10,000	Tolerance F = 1% J = 5% K = 10%	RoHS Compliant Non-compliant version not recommended for new designs

FEATURES

- 35 Watt power rating at 25°C
- SMD - TO-220 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.

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

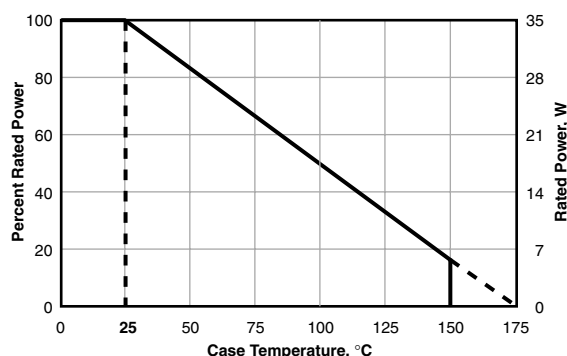
Insulation Resistance: 10GΩ min.

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



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.

STOCK PART NUMBERS

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