

High Power Film Resistors Series HTO TO-220 Style, Non-Inductive

**100 Watts
in TO-220 Style**

Nicrom Electronic's HTO TO-220 package resistor provides up to **100 Watts** of steady state power when properly used in today's well defined heat sink applications. These High Power non-inductive resistors are built under proprietary processes that deliver more power handling capability than other TO-220 package resistors of similar size. Standard terminal forms are provided for manual or automatic insertion.



**NON
INDUCTIVE**

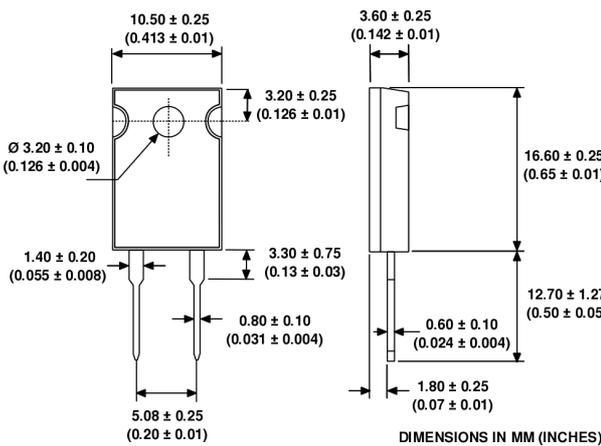
Features:

- Up to 100W Power Rating @ 25°C case temperature
- Non-inductive design
- Single Screw Mounting
- Compact TO-220 Package

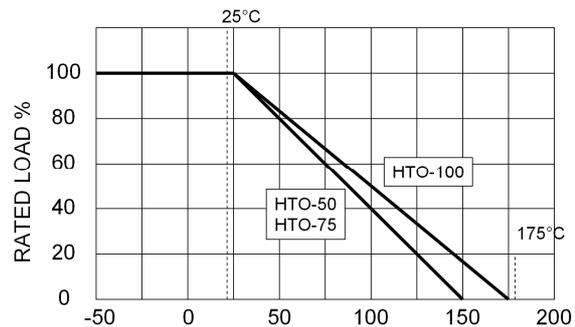
Applications:

- Switching Power Supplies
- Snubbers and Motor Control
- High Frequency and Pulse Loading
- Voltage Regulation
- Automotive and Measurements

Model	Power Rating	Package Style	Resistance		Max. Voltage	Thermal Resistance R _{Jc} Film (J) to Case (C)	Max. Temp. T _{MAX}
			Min.	Max.			
HTO-50	50 Watts *	TO-220	0.01 Ω	1 MΩ	350 V	2.50°C/Watt	150°C
HTO-75	75 Watts *	TO-220	0.10 Ω	100 KΩ	500 V	1.67°C/Watt	150°C
HTO-100	100 Watts *	TO-220	0.10 Ω	100 KΩ	500 V	1.50°C/Watt	175°C



Derating Curve



*Case temperature must be used for definition of the applied power limit. 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.

Characteristics

Tolerances	1%, 2%, 5%, 10% (0.5% and 0.25% on request)		
Temperature Coefficients**	10 Ω and above 50 ppm/°C, between 0.01 Ω and 10 Ω, 100 ppm/°C		
Operating Temperature	-55°C to T _{max} .	(extended temperature range available)	
Insulation Resistance	> 10'000 MΩ	500 Volt 25 °C 75% relative humidity	
Dielectric Strength	> 1'800 VAC	25 °C 75% relative humidity	
Thermal Shock	Δ R/R ± (0.3% + 0.0005 ohm) max.	MIL Std. 202, Method 107 Cond. F	IEC 68 - 2 -14
Overload	Δ R/R ± (0.3% + 0.0005 ohm) max.	1.5 x P _{nom} , 5 sec (do not exceed 1.5 times max. voltage)	
Moisture Resistance	Δ R/R ± (0.5% + 0.0005 ohm) max.	MIL Std. 202, method 106	IEC 68 - 2 - 3
Load Stability	Δ R/R ± (1% + 0.0005 ohm) max.	2000 hours at rated power	
Terminal Strength	Δ R/R ± (0.2% + 0.0005 ohm) max.	MIL Std. 202, Method 211 Cond. A (Pull Test) 2.4N	
Vibration, High Frequency	Δ R/R ± (0.2% + 0.0005 ohm) max.	MIL Std. 202, Method 204 Cond. D	
Shock	Δ R/R ± (0.4% + 0.0005 ohm) max.	100G, MIL Std. 202, Method 213, Cond. I	
Encapsulation	Epoxy High Temperature Case	Core Material	Al ₂ O ₃ (96%)
Lead Material	Tinned Copper	Resistor Material	Ruthenium Oxide
Maximum Torque	0.9 Nm	Power rating in free air	2.5 W

** Temperature Coefficient referenced to 25°C, ΔR taken at +125°C.