

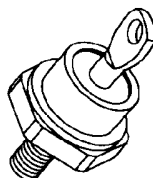


NES

NEW ENGLAND SEMICONDUCTOR

NSD117

POWER RECTIFIERS



DO-5

ULTRA FAST
RECTIFIERS

100 AMPERES

MAXIMUM RATINGS (PER LEG)

Rating	Symbol	Value	Unit
Peak Repetitive Inverse Voltage	V_{RRM}	250	Volts
Average Rectified Forward Current (Rated V_R) $T_C = -150^{\circ}\text{C}$	$I_{F(AV)}$	100	Amps
Non-repetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I_{FSM}	800	Amps
Operating Junction Temperature	T_J	-55 to +175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to +175	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

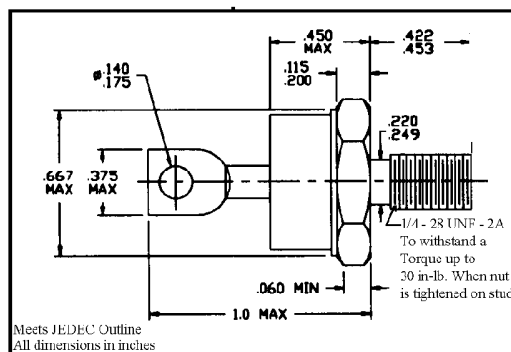
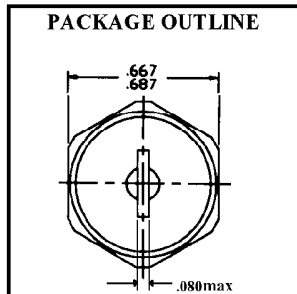
Thermal Resistance – Junction to Case	$R_{\theta JC}$	3.0	$^{\circ}\text{C/W}$
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ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage ¹ $I_F = 100$ Amps, $T_J = 25^{\circ}\text{C}$	V_F	1.4	Volts
Maximum Instantaneous Reverse Current ¹ Rated dc Voltage, $T_J = 25^{\circ}\text{C}$ Rated dc Voltage, $T_J = 100^{\circ}\text{C}$, $F = 60$ Hz Junction Capacitance $V_R = 10$ V	I_R	50 5.0 300	μA mA p'
Reverse Recovery Time/Diode $I_F = 0.5$ A, $I_R = 1.0$ A, $I_{REC} = 0.25$ A $T_A = 25^{\circ}\text{C}$	t_{rr}	50	ns

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$

PACKAGE OUTLINE



NEW ENGLAND SEMICONDUCTOR

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T4-4.8-860-1207 REV: --