

1N3889 THRU 1N3893

12 AMP

FAST RECOVERY RECTIFIER

50-400 VOLTS



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CASE STYLE



FEATURES

- FAST RECOVERY 100 NSEC MAX.
 - PIV TO 400 VOLTS
 - LOW REVERSE LEAKAGE
 - HERMETICALLY SEALED
 - SINGLE CHIP CONSTRUCTION
 - HIGH SURGE RATING 200 AMPS
 - LOW THERMAL RESISTANCE
- FOR REVERSE POLARITY ADD "R" TO PART NUMBER

MAXIMUM RATINGS

Rating		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Per Leg and DC Blocking Voltage Per Leg	1N3889	$V_{RM} (rep)$ V_R	50	Volts
	1N3890		100	
	1N3891		200	
	1N3892		300	
	1N3893		400	
RMS Reverse Voltage Per Leg	1N3889	V_r	35	Volts
	1N3890		70	
	1N3891		140	
	1N3892		210	
	1N3893		280	
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ C$)		I_O	12	Amps
Peak Repetitive Forward Current ($T_C = 55^\circ C$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)		$I_{FM} (rep)$	60	Amps
Peak Surge Current ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)		$I_{FM} (surge)$	200	Amps
Operating and Storage Temperature		T_J, T_{stg}	-65 to +175	$^\circ C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2	$^\circ C/W$

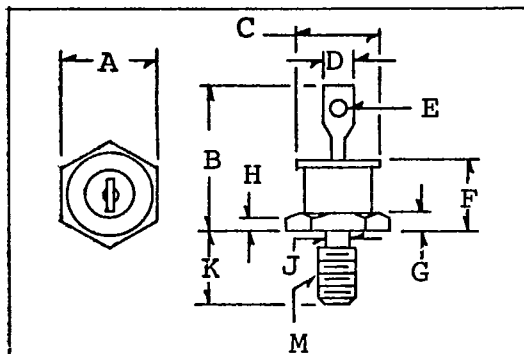
ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle, Per Leg (I_F (Max), 60 Hz. Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$	---	Vdc
Max Instantaneous Forward Drop Per Leg ($I_F = 12$ Adc, $T_C = 25^\circ\text{C}$, 300 μs Pulse) ($I_F = 38$ Adc, $T_C = 150^\circ\text{C}$, 300 μs Pulse)	V_F	1.4 1.5	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle, Per Leg (Rated V_R , 60Hz, Square Wave, $T_C = 100^\circ\text{C}$)	$I_{R(AV)}$	3	mA
Max Reverse Leakage Current Per Leg (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	.025	mA
Max Junction Capacitance Per Leg. ($V_R = 10$ V, $T_C = 25^\circ\text{C}$)	C_J	100	pf

REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 1.0$ Amp to $V_R = 30$ Vdc.)	t_{rr}	---	100	200	ns

PHYSICAL DIMENSIONS



KEY TO DIMENSIONS:

(Inches)

- A = .424 - .437
- B = .800 MAX.
- C = .424 MAX.
- D = .250 MAX.
- E = .060 MIN.
- F = .405 MAX.
- G = .075 - .175
- H = .060 MIN.
- J = .163 - .189
- K = .422 - .453
- M = 10-32 UNF-2A

TYPICAL OPERATING CURVES

