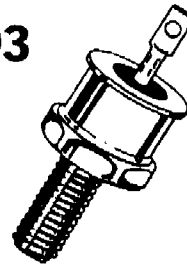


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1N3889 thru 1N3893 MR1376 FAST RECOVERY POWER RECTIFIERS 50-600 VOLTS 12 AMPERES



*MAXIMUM RATINGS

Rating	Symbol	1N3889	1N3890	1N3891	1N3892	1N3893	MR1376	Unit
Peak Repetitive Reverse Voltage	V_{RRM}							Volts
Working Peak Reverse Voltage	V_{RWM}	50	100	200	300	400	600	
DC Blocking Voltage	V_R							Volts
Non-Repetitive Peak Reverse Voltage	V_{RSM}	75	150	250	350	450	650	Volts
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	210	280	420	Volts
Average Rectified Forward Current (Single phase, resistive load, $T_C = 100^\circ\text{C}$)	I_O	12						Amps
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions)	I_{FSM}	200 (one cycle)						Amp
Operating Junction Temperature Range	T_J	-65 to +150						$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +175						$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.0	$^\circ\text{C}/\text{W}$

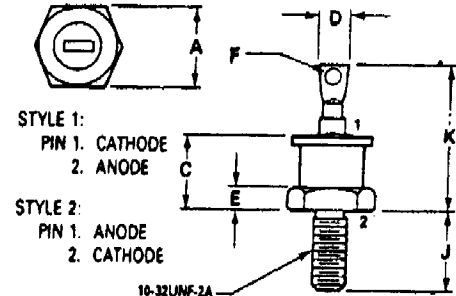
*ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage ($I_F = 38 \text{ Amp}$, $T_J = 150^\circ\text{C}$)	V_F	-	1.2	1.5	Volts
Forward Voltage ($I_F = 12 \text{ Amp}$, $T_C = 25^\circ\text{C}$)	V_F	-	1.0	1.4	Volts
Reverse Current (rated dc voltage)	I_R	-	10 0.5	25 3.0	μA mA
			$T_C = 25^\circ\text{C}$		
			$T_C = 100^\circ\text{C}$		

*REVERSE RECOVERY CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 1.0 \text{ Amp}$ to $V_R = 30 \text{ Vdc}$, Figure 16) ($I_{FM} = 38 \text{ Amp}$, $di/dt = 28 \text{ A}/\mu\text{s}$, Figure 17)	t_{rr}	-	150 200	200 400	ns
Reverse Recovery Current ($I_F = 1.0 \text{ Amp}$ to $V_R = 30 \text{ Vdc}$, Figure 16)	$I_{RM(REC)}$	-	-	2.0	Amp

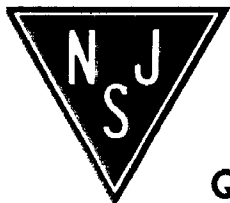
POLARITY: Cathode to Case; Reverse polarity available by adding "R" Suffix, 1N3889RA



NOTES:

- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- CONTROLLING DIMENSION: INCH.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.75	11.12	0.423	0.438
C	-	10.28	-	0.405
D	4.07	4.69	0.160	0.185
E	1.91	4.44	0.075	0.175
F	2.29	2.41	0.090	0.095
J	10.72	11.50	0.422	0.453
K	18.80	20.32	0.740	0.800



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

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