

# 1N3889 thru 1N3893

## MR1376



**SOLID STATE INC.**

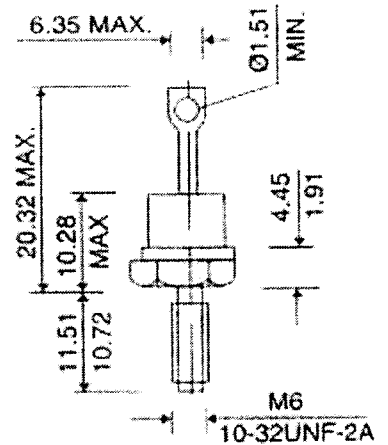
46 FARRAND STREET  
BLOOMFIELD, NEW JERSEY 07003

www.solidstateinc.com

**FAST RECOVERY  
POWER RECTIFIERS**

**50-600 VOLTS  
12 AMPERES**

**DO-4**



**\*MAXIMUM RATINGS**

Rating	Symbol	1N3889	1N3890	1N3891	1N3892	1N3893	MR1376	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	Volts
Working Peak Reverse Voltage	V <sub>RWM</sub>							
DC Blocking Voltage	V <sub>R</sub>							
Non-Repetitive Peak Reverse Voltage	V <sub>RSM</sub>	75	150	250	350	450	650	Volts
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	210	280	420	Volts
Average Rectified Forward Current (Single phase, resistive load, T <sub>C</sub> = 100°C)	I <sub>O</sub>	12						Amps
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions)	I <sub>FSM</sub>	200 (one cycle)						Amp
Operating Junction Temperature Range	T <sub>J</sub>	-65 to +150						°C
Storage Temperature Range	T <sub>stg</sub>	-65 to +175						°C

**THERMAL CHARACTERISTICS**

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	2.0	°C/W

**\*ELECTRICAL CHARACTERISTICS**

Characteristic	Symbol	Min	Typ	Max	Unit	
Instantaneous Forward Voltage (I <sub>F</sub> = 38 Amp, T <sub>J</sub> = 150°C)	V <sub>F</sub>	-	1.2	1.5	Volts	
Forward Voltage (I <sub>F</sub> = 12 Amp, T <sub>C</sub> = 25°C)	V <sub>F</sub>	-	1.0	1.4	Volts	
Reverse Current (rated dc voltage)	I <sub>R</sub>	T <sub>C</sub> = 25°C	-	10	25	μA
		T <sub>C</sub> = 100°C	-	0.5	3.0	mA

**\*REVERSE RECOVERY CHARACTERISTICS**

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time (I <sub>F</sub> = 1.0 Amp to V <sub>R</sub> = 30 Vdc, Figure 16)	t <sub>rr</sub>	-	100	200	ns
(I <sub>FM</sub> = 36 Amp, di/dt = 25 A/μs, Figure 17)		-	200	400	
Reverse Recovery Current (I <sub>F</sub> = 1.0 Amp to V <sub>R</sub> = 30 Vdc, Figure 16)	I <sub>RM(REC)</sub>	-	-	2.0	Amp

**POLARITY:** Cathode to Case. Reverse Polarity available by adding Suffix "R" to type number.