

# MOTOROLA SEMICONDUCTOR TECHNICAL DATA

**MR830 MR831  
MR832 MR834  
MR836**

## HERMETICALLY SEALED, AXIAL LEAD MOUNTED FAST RECOVERY POWER RECTIFIERS

... designed for special applications such as dc power supplies, inverters, converters, ultrasonic systems, choppers, low RF interference and free wheeling diodes. A complete line of fast recovery rectifiers having typical recovery time of 150 nanoseconds providing high efficiency at frequencies to 250 kHz.

## FAST RECOVERY POWER RECTIFIERS

**50-600 VOLTS  
3 AMPERES**

### MAXIMUM RATINGS

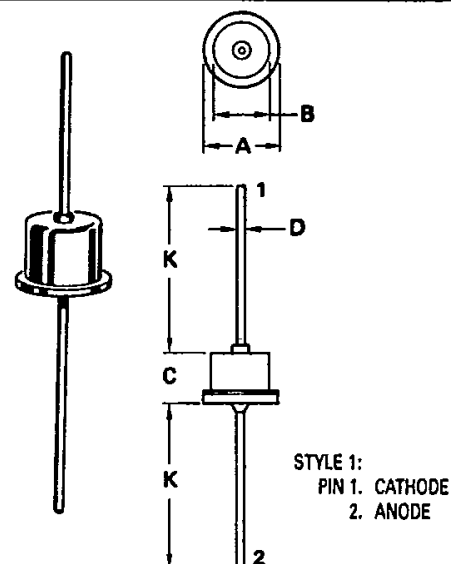
Rating	Symbol	MR830	MR831	MR832	MR834	MR836	Unit
Peak Repetitive Reverse Voltage	VRRM	50	100	200	400	600	Volts
Working Peak Reverse Voltage	VRWM						
DC Blocking Voltage	VR						
Average Rectified Forward Current (Single phase, resistive load, $T_C = 100^\circ\text{C}$ )	$I_O$	3.0					Amps
Non-Repetitive Peak Surge Current (surge applied at rated load conditions)	$I_{FSM}$	100					Amps
Operating Junction Temperature Range	$T_J$	-65 to +150					$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-65 to +175					$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Forward Voltage ( $I_F = 3.0 \text{ A dc}$ , $T_A = 25^\circ\text{C}$ )	$V_F$	—	1.1	Volts
Reverse Current (rated DC Voltage) $T_A = 25^\circ\text{C}$	$I_R$	—	0.5	mA
$T_A = 100^\circ\text{C}$		—	1.5	

### REVERSE RECOVERY CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ( $I_F = 1.0 \text{ Amp}$ to $V_R = 30 \text{ Vdc}$ )	$t_{rr}$	—	150	200	ns
( $I_{FM} = 15 \text{ Amp}$ , $di/dt = 26 \text{ A}/\mu\text{s}$ )		—	150	300	ns
Reverse Recovery Current ( $I_F = 1.0 \text{ Amp}$ to $V_R = 30 \text{ Vdc}$ )	$I_{RM(REC)}$	—	—	2.0	Amp



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	—	11.43	—	0.450
B	—	8.89	—	0.350
C	—	7.62	—	0.300
D	1.17	1.42	0.046	0.056
K	24.89	—	0.980	—

**CASE 60-01  
METAL**

### MECHANICAL CHARACTERISTICS

**CASE:** Welded, hermetically sealed

**FINISH:** All external surfaces corrosion resistant and leads readily solderable

**POLARITY:** Cathode to Case

**WEIGHT:** 2.4 Grams (Approximately)