

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

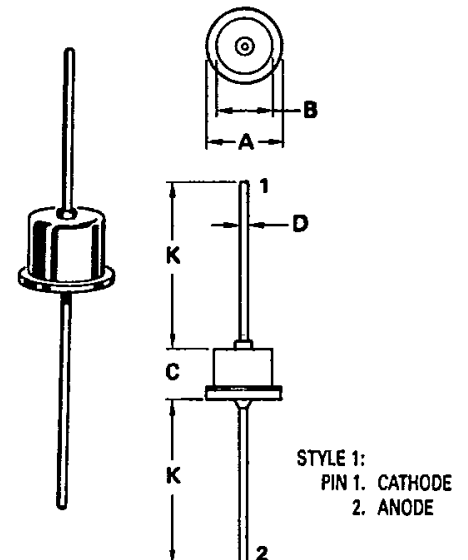
| Rating | Symbol | MR830 | MR831 | MR832 | MR834 | MR836 | Unit |
|--|---------------------------------|-----------------|-------|-------|-------|-------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 50 | 100 | 200 | 400 | 600 | Volts |
| 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)