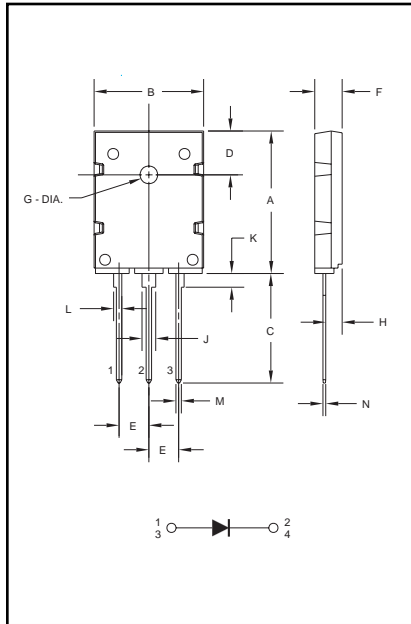
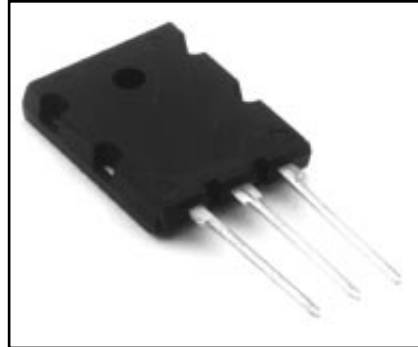


Super Fast Recovery Single Diode 50 Amperes/600 Volts



Outline Drawing

| Dimension | Inches | Millimeters |
|-----------|------------------|--------------|
| A | 1.02±0.02 | 26.0±0.5 |
| B | 0.81 Max. | 20.5 Max. |
| C | 0.79 Min. | 20.0 Min. |
| D | 0.24±0.008 | 6.0±0.2 |
| E | 0.214±0.012 | 5.45±0.3 |
| F | 0.20±0.012 | 5.0±0.3 |
| G | 0.214±0.012 Dia. | 3.2±0.2 Dia. |
| H | 0.12±0.012 | 3.0±0.3 |
| J | 0.10±0.012 | 2.5±0.3 |
| K | 0.10 | 2.5 |
| L | 0.08±0.012 | 2.0±0.3 |
| M | 0.04±0.008 | 1.0±0.2 |
| N | 0.02±0.008 | 0.6±0.2 |



RM50HG-12S
Super Fast Recovery
Single Diode
50 Amperes/600 Volts

Description:

Powerex Super Fast Recovery Diodes are designed for use in applications requiring fast switching.

Features:

- Non-Isolated Package
- Planar Chips
- $t_{rr} = 200$ ns Max.

Applications:

- Snubber Circuits
- Switching Power Supplies
- Free Wheeling

Ordering Information:

Select the complete eight digit part number you desire from the table below.

Example: RM50HG-12S is a 600 Volt, 50 Ampere Super Fast Recovery Single Diode.

| Type | Current Rating Amperes | Voltage Volts (x50) |
|------|---------------------------|------------------------|
| RM | 50 | 12 |



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

RM50HG-12S
Super Fast Recovery
Single Diode
 50 Amperes/600 Volts

Absolute Maximum Ratings

| Characteristics | Symbol | Conditions | RM50HG-12S | Units |
|--|-------------|------------|------------|------------------------|
| Peak Forward Blocking Voltage | V_{DRM} | — | 600 | Volts |
| Peak Reverse Blocking Voltage (Non-Repetitive) | V_{RRM} | — | 720 | Volts |
| DC Reverse Blocking Voltage | $V_{R(DC)}$ | — | 480 | Volts |
| DC Current, $T_C = 80^\circ\text{C}$ (Resistive Load) | $I_{F(DC)}$ | — | 50 | Amperes |
| Peak Half-Cycle Surge (Non-Repetitive) On-State Current (60Hz) | I_{FSM} | — | 1000 | Amperes |
| I^2t for Fusing, (8.3 milliseconds) | I^2t | — | — | A^2sec |
| Storage Temperature | T_{STG} | — | -40 to 125 | $^\circ\text{C}$ |
| Operating Temperature | T_j | — | -40 to 150 | $^\circ\text{C}$ |
| Maximum Mounting Torque M3 Mounting Screw | — | — | 10 | kg.-cm. |
| Weight (Typical) | — | — | 10 | Grams |

Electrical and Thermal Characteristics, $T_j = 25^\circ\text{C}$ unless otherwise specified

| Characteristics | Symbol | Test Conditions | RM50HG-12S | Units |
|---|-------------------|---|------------|------------------------------|
| Blocking State Maximums | | | | |
| Reverse Leakage Current, Peak | I_{RRM} | V_{RRM} applied, $T_j = 150^\circ\text{C}$ | 1.0 | mA |
| | | V_{RRM} applied, $T_j = 25^\circ\text{C}$ | 0.1 | mA |
| Conducting State Maximums | | | | |
| Forward Voltage Drop | V_{FM} | $T_j = 25^\circ\text{C}$, $I_{FM} = 200\text{A}$ | 4.0 | Volts |
| Switching Minimums | | | | |
| Reverse Recovery Time | t_{rr} | $T_j = 25^\circ\text{C}$, $I_{FM} = 100\text{A}$ | 0.2 | μs |
| Reverse Recovery Charge | Q_{rr} | $di/dt = -1000\text{A}/\mu\text{s}$, $V_R = 300\text{V}$ | — | μC |
| Lead Integrity | | | | |
| | — | Tension Load: 25 kg | 30.0 | s |
| | — | Bending Load: 1 kg bent to 90° | 2.0 | times |
| Thermal Maximums | | | | |
| Thermal Resistance, Junction-to-Case | $R_{\theta(J-C)}$ | Diode | 0.5 | $^\circ\text{C}/\text{Watt}$ |
| Contact Thermal Resistance, Case-to-Fin | $R_{\theta(C-S)}$ | Case to Fin, Thermal Grease Applied | 0.5 | $^\circ\text{C}/\text{Watt}$ |

*Maximum ratings unless otherwise specified