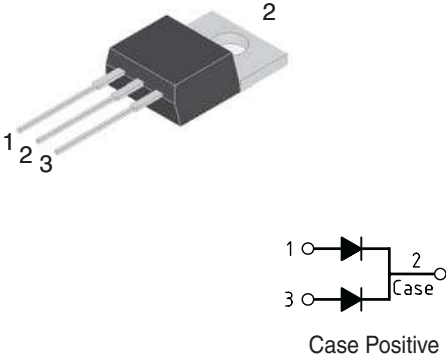


10 Amp. Glass Passivated Fast Recovery Rectifier

| | |
|--|---|
| <p>TO-220AB</p>  <p>The image shows a TO-220AB package with three leads labeled 1, 2, and 3. Lead 2 is the case. Below it is a schematic of two diodes in series, with lead 1 connected to the anode of the first diode, lead 3 to the cathode of the first diode, and lead 2 to the anode of the second diode. The case is labeled 'Case Positive'.</p> | <p>Voltage 400 to 1000 V</p> <p>Current 10 A</p> <ul style="list-style-type: none"> • Glass Passivated Junction • High current capability • The plastic material U/L recognition 94 V-0 • Terminals: Leads solderable per MIL-STD202 • Low forward Voltage drop |
|--|---|

Absolute Maximum Ratings, according to IEC publication No. 134

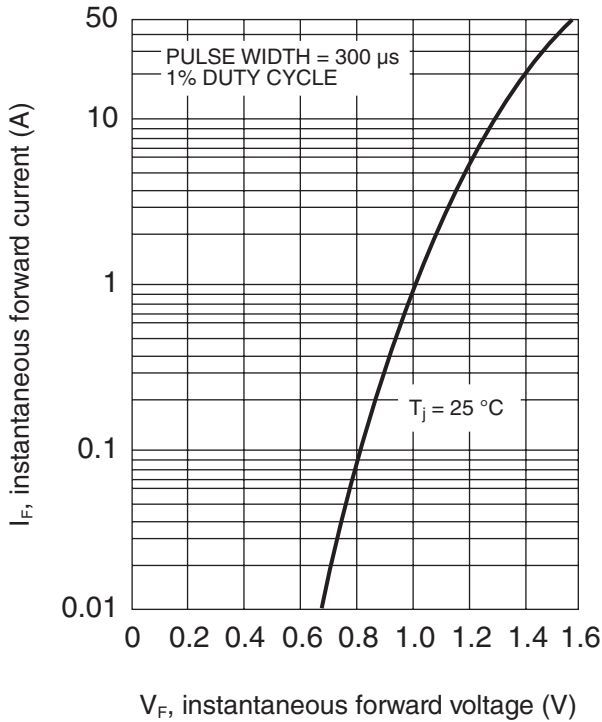
| | | FR1004G | FR1005G | FR1007G |
|-------------|--|------------------|---------|---------|
| V_{RRM} | Peak recurrent reverse voltage (V) | 400 | 600 | 1000 |
| V_{RMS} | Maximum RMS voltage (V) | 280 | 420 | 700 |
| V_{DC} | Maximum DC blocking voltage (V) | 400 | 600 | 1000 |
| $I_{F(AV)}$ | Maximum average Forward current at $T_C = 105\text{ }^\circ\text{C}$ (both diodes conducting) | 10 A | | |
| I_{FSM} | 8.3 ms. peak forward surge current (Jedec Method) | 125 A | | |
| t_{RR} | Max. reverse recovery time from $I_F = 0.5\text{ A}$; $I_R = 1\text{ A}$; $I_{RR} = 0.25\text{ A}$ | 150 ns | 250 ns | 500 ns |
| C_j | Typical Junction Capacitance at 1 MHz and reverse voltage of $4V_{DC}$ | 40 pF | | |
| T_j | Operating temperature range | - 65 to + 150 °C | | |
| T_{stg} | Storage temperature range | - 65 to + 150 °C | | |

Electrical Characteristics

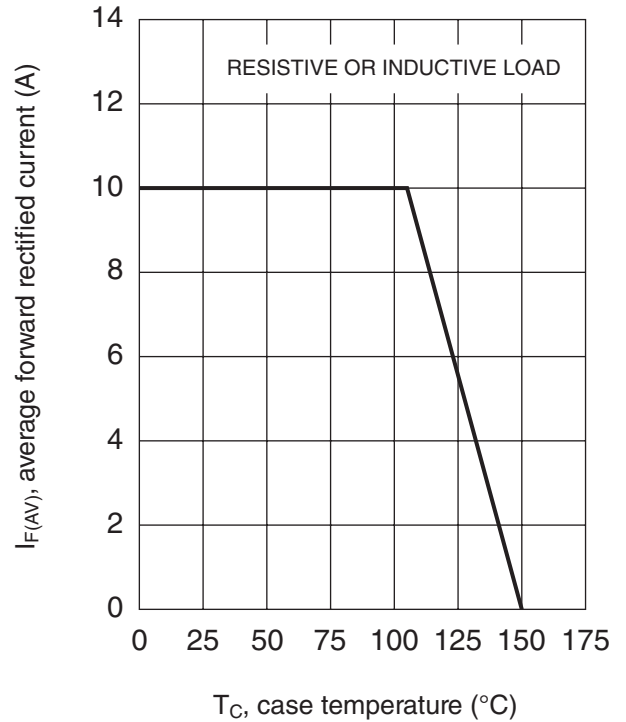
| | | FR1004G | FR1005G | FR1007G |
|-------------|--|-------------------|---------|---------|
| V_F | Max. forward voltage drop at $I_F = 5\text{ A}$ $T_j = 25\text{ }^\circ\text{C}$ | 1.3 V | | |
| I_R | Max. Instantaneous reverse current at $V_R = V_{RRMax}$ $T_j = 25\text{ }^\circ\text{C}$ | 5 μA | | |
| | $T_j = 125\text{ }^\circ\text{C}$ | 100 μA | | |
| R_{thj-C} | Typical Thermal Resistance | 3.0 °C/W | | |

10 Amp. Glass Passivated Fast Recovery Rectifier

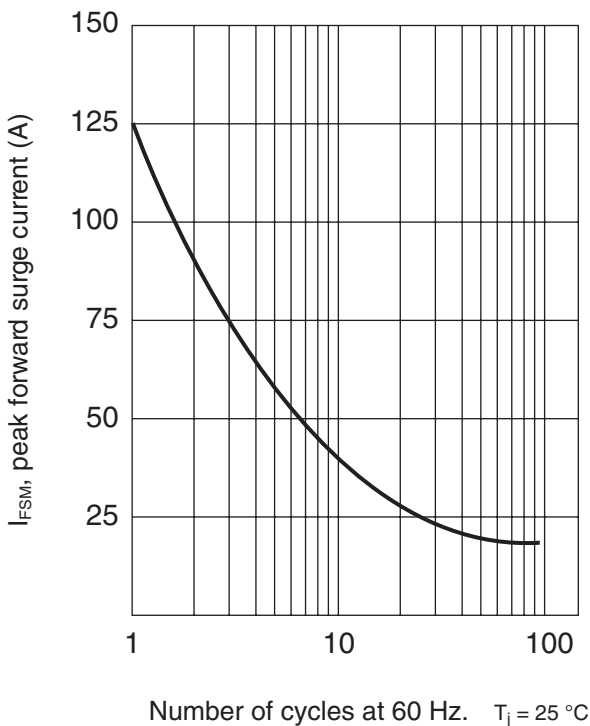
TYPICAL FORWARD CHARACTERISTIC



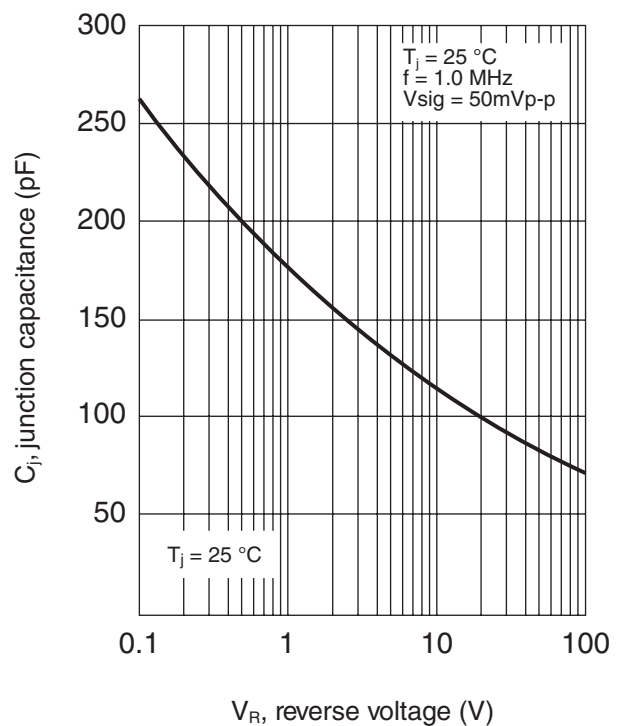
FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



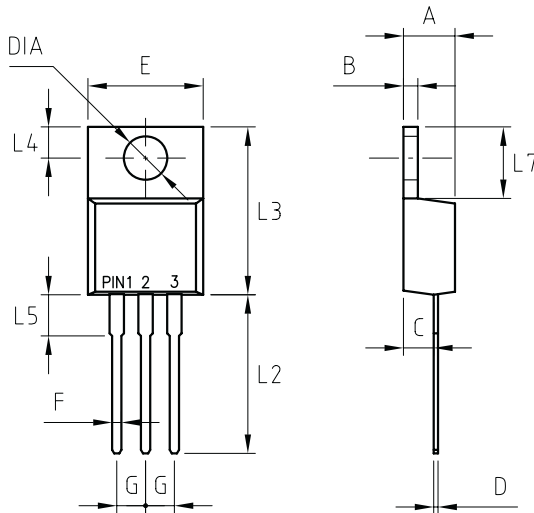
TYPICAL JUNCTION CAPACITANCE



10 Amp. Glass Passivated Fast Recovery Rectifier

PACKAGE MECHANICAL DATA

TO-220AB



| REF. | DIMENSIONS | |
|------|------------|-------|
| | Milimeters | |
| | Min. | Max. |
| A | 4.44 | 4.70 |
| B | 1.14 | 1.40 |
| C | 2.54 | 2.79 |
| D | 0.35 | 0.64 |
| E | -- | 10.5 |
| F | 0.68 | 0.94 |
| G | 2.41 | 2.67 |
| L2 | 13.46 | 14.22 |
| L3 | 14.90 | 15.10 |
| L4 | 2.62 | 2.87 |
| L5 | 3.56 | 4.06 |
| L7 | 5.84 | 6.86 |
| DIA | 3.74 | 3.91 |