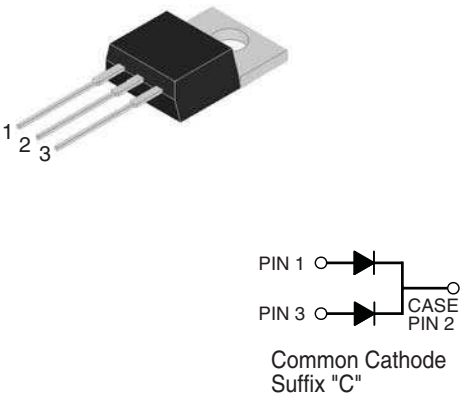


20.0 Amp. Glass Passivated Ultrafast Rectifiers

| | |
|---|--|
| <p>TO-220AB</p>  <p style="text-align: center;">Common Cathode Suffix "C"</p> | <p>Voltage 150 V to 600 V</p> <p>Current 20.0 A</p> <ul style="list-style-type: none"> High efficiency, low VF High current capability High reliability High surge current capability Low power loss. For use in low voltage, high frequency inverter, free wheeling, and polarity protection application. <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> Cases: TO-220AB Molded plastic Epoxy: UL 94V0 rate flame retardant Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed Polarity: As marked High temperature soldering guaranteed: 260 °C/10 seconds, 4.06mm from case. Weight: 2.24 grams |
|---|--|

Absolute Maximum Ratings, according to IEC publication No. 134

| | | SF 2003G | SF 2004G | SF 2006G | SF 2008G |
|-------------|--|---------------------|---------------------|---------------------|---------------------|
| V_{RRM} | Maximum Recurrent Peak Reverse Voltage (V) | 150 | 200 | 400 | 600 |
| V_{RMS} | Maximum RMS Voltage (V) | 105 | 140 | 280 | 420 |
| V_{DC} | Maximum DC Blocking Voltage (V) | 150 | 200 | 400 | 600 |
| $I_{F(AV)}$ | Maximum Average Forward Rectified Current @ $T_c = 100\text{ °C}$ | 20 A | | | |
| I_{FSM} | Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) | 150 A | | | |
| T_{rr} | Maximum Reverse Recovery Time from $I_F = 0.5A; I_R = 1A; I_{RR} = 0.25A$ | 35 nS | | | |
| C_j | Typical Junction Capacitance at 1 MHz and reverse voltage of $4V_{DC}$ | 80 pF | | | |
| T_j | Operating Temperature Range | -65 to +150 °C | | | |
| T_{stg} | Storage Temperature Range | -65 to +150 °C | | | |

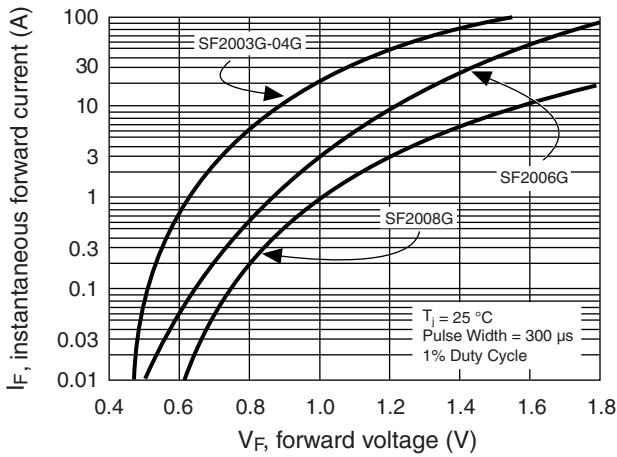
Electrical Characteristics

| | | | | |
|---------------|---|--------------------------|-------|-------|
| V_F | Maximum Instantaneous Forward Voltage @ 10 A | 0.975 V | 1.3 V | 1.7 V |
| I_R | Maximum DC Reverse Current @ $T_A = 25\text{ °C}$ at Rated DC Blocking Voltage @ $T_A = 100\text{ °C}$ | 5 μ A 400 μ A | | |
| $R_{th(j-c)}$ | Typical Thermal Resistance (See note) | 2.5 °C/W | | |

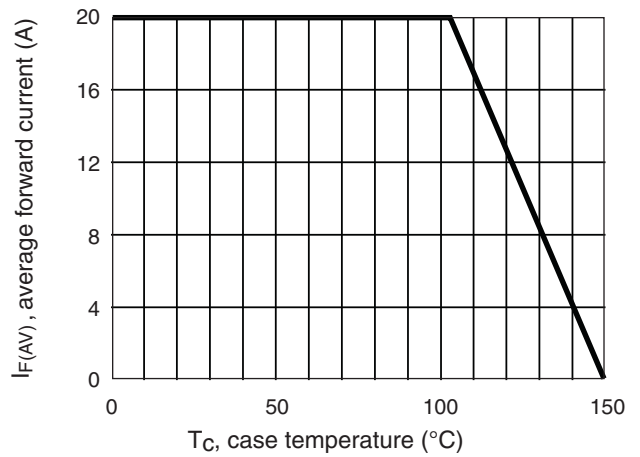
NOTE: Thermal Resistance from Junction to Case Mounted on Heatsink size of 76.2 x 127 x 6.35 Al-Plate.

Rating And Characteristic Curves

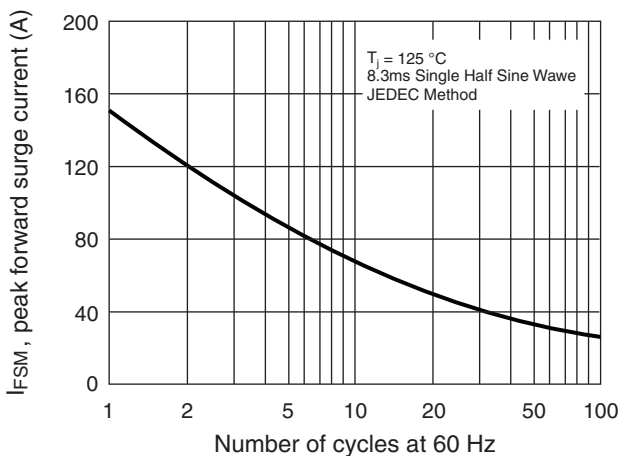
TYPICAL FORWARD CHARACTERISTICS PER LEG



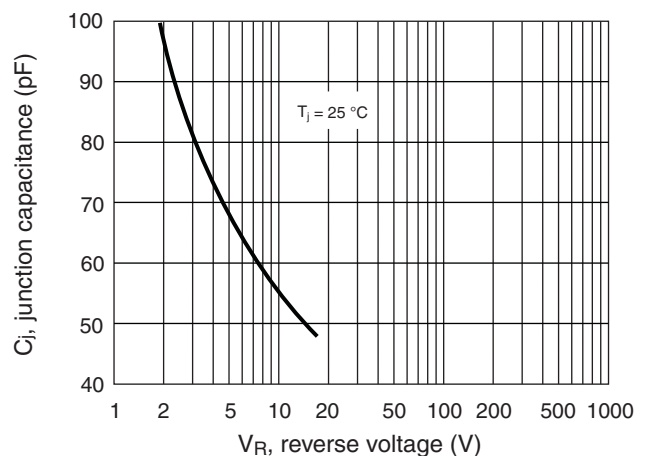
MAXIMUM AVERAGE FORWARD CURRENT DERATING CURVE



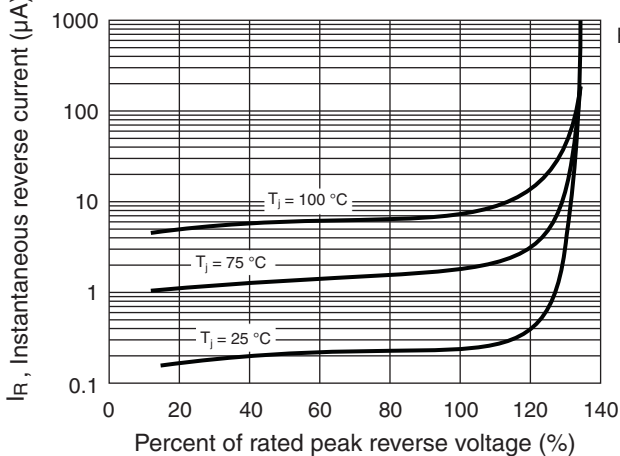
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG



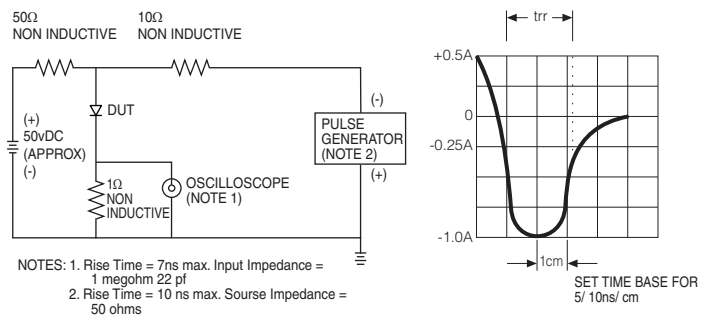
TYPICAL JUNCTION CAPACITANCE PER LEG



TYPICAL REVERSE CHARACTERISTICS



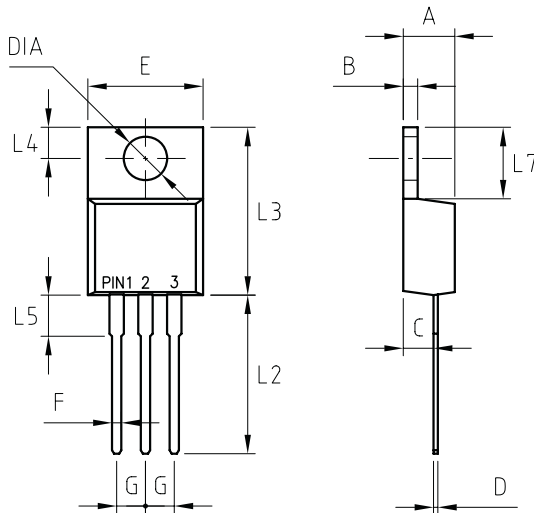
REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



16 Amp. Glass Passivated Ultrafast 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 |