# MURF1005 THRU MURF1060

## SUPER FAST RECOVERY SILICON RECTIFIER

**Reverse Voltage - 50 to 600 Volts  Forward Current - 10.0 Ampere**

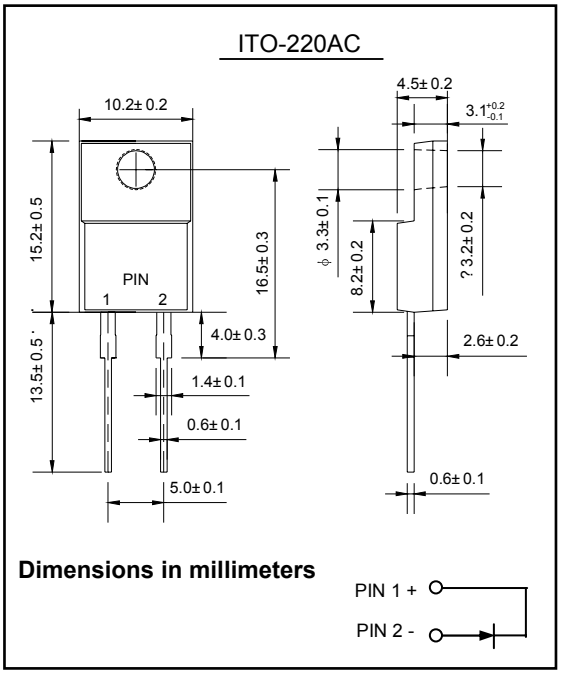
## FEATURES

- Glass Passivated Die Construction
- Super-Fast Switching
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

## MECHANICAL DATA

- Case: ITO-220AC, Full Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 11.5 cm-kg (10 in-lbs) Max.

RoHS Compliant




## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Characteristic | Symbol | MURF 1005 | MURF 1010 | MURF 1015 | MURF 1020 | MURF 1030 | MURF 1040 | MURF 1060 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Average Rectified Output Current @$T_C$ = 105°C | $I_O$ | 10.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 150 | | | | | | | A |
| Forward Voltage @$I_F$ = 10.0A | $V_{FM}$ | 0.95 | | | | 1.3 | | 1.7 | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 125°C | $I_{RM}$ | 10<br>500 | | | | | | | μA |
| Reverse Recovery Time (Note 1) | $t_{rr}$ | 35 | | | | 50 | | | nS |
| Typical Junction Capacitance (Note 2) | $C_j$ | 70 | | | | 50 | | | pF |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -65 to +150 | | | | | | | °C |

Note: 1. Measured with IF = 0.5A, IR = 1.0A, IRR = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

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## RATINGS AND CHARACTERISTIC CURVES

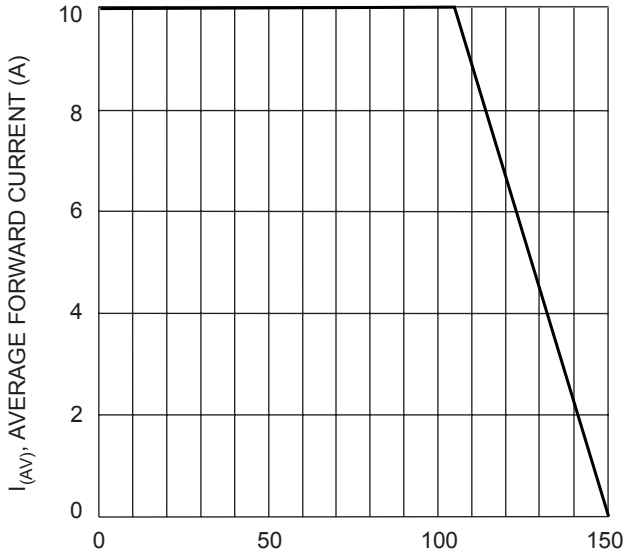


Fig. 1 Forward Current Derating Curve

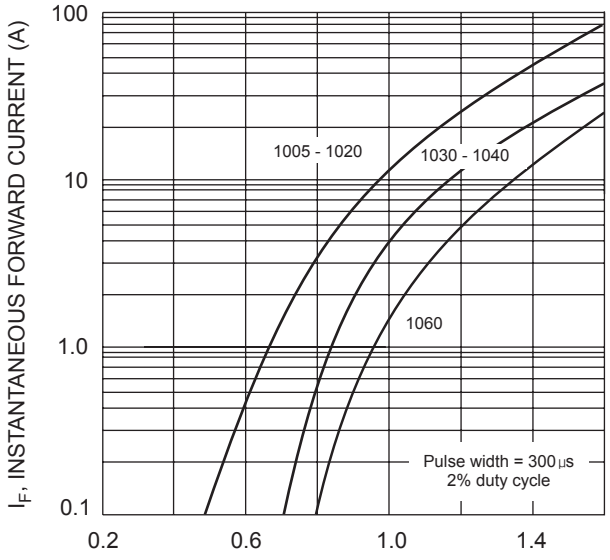


Fig. 2 Typical Forward Characteristics

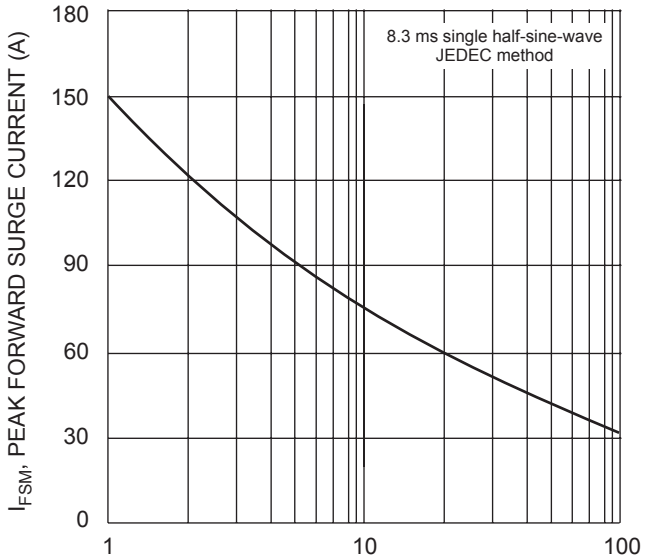


Fig. 3 Max Non-Repetitive Surge Current

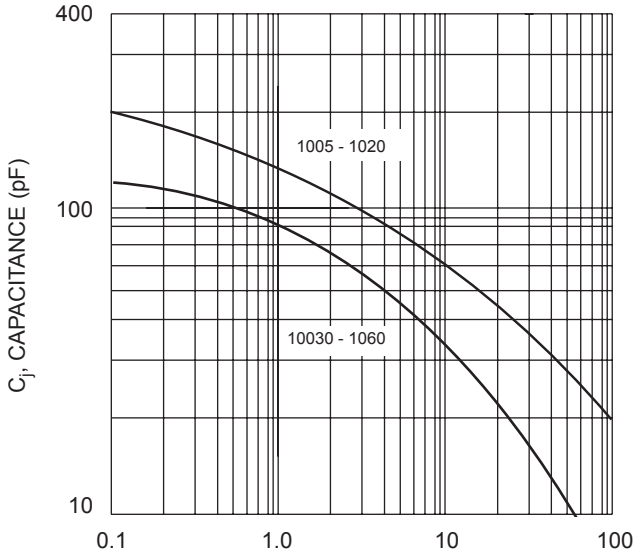


Fig. 4 Typical Junction Capacitance