

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

**FEATURES**

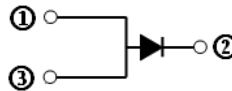
- High thermal reliability
- Patented Super Barrier Rectifier Technology
- High forward surge capability
- Ultra low power loss and high efficiency
- Excellent high temperature stability
- Plastic material-UL flammability 94V-0
- High current capability
- Low reverse current

**MECHANICAL DATA**

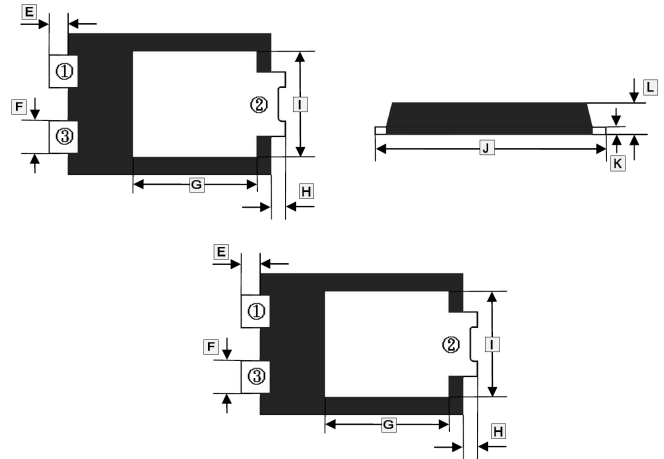
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish) Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band

**PACKAGE INFORMATION**

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| TO-277D | 5K  | 13 inch     |



**TO-277D**



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 1.65       | 1.95 | G    | 3.25       | 3.85 |
| B    | 5.3        | 5.5  | H    | 0.45       | 0.65 |
| C    | 1.7        | 1.9  | I    | 2.9        | 3.2  |
| D    | 3.8        | 4.2  | J    | 6.4        | 6.6  |
| E    | 0.45       | 0.65 | K    | 0.3        | 0.45 |
| F    | 0.8        | 1.0  | L    | 1.0        | 1.2  |

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, de-rate current by 20%.)

| Parameter   | Symbol          | Rating       | Unit   |
|---|-----------------|--------------|--------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 150          | V      |
| Working Peak Reverse Voltage  | $V_{RSM}$       | 105          | V      |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 150          | V      |
| Maximum Average Forward Rectified Current   | $I_F$           | 5            | A      |
| Peak Forward Surge Current, @8.3ms single half-wave Superimposed on rated load (JEDEC method) | $I_{FSM}$       | 80           | A      |
| Typical Thermal Resistance from Junction to Ambient   | $R_{\theta JA}$ | 80           | °C / W |
| Typical Thermal Resistance from Junction to Lead  | $R_{\theta JL}$ | 10           | °C / W |
| Operating and Storage Temperature Range   | $T_J, T_{STG}$  | 150, -50~150 | °C     |

**ELECTRICAL CHARACTERISTICS**

| Parameter   | Symbol | Typ. | Max. | Unit | Test Condition           |
|---|--------|------|------|------|--------------------------|
| Maximum Instantaneous Forward Voltage                   | $V_F$  | 0.62 | -    | V    | $I_F=1A, T_J=25^\circ C$ |
|   |        | 0.74 | -    |      | $I_F=3A, T_J=25^\circ C$ |
|   |        | -    | 0.84 |      | $I_F=5A, T_J=25^\circ C$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$  | -    | 0.2  | mA   | $T_J=25^\circ C$         |
|   |        | -    | 50   |      | $T_J=100^\circ C$        |
| Typical Junction Capacitance <sup>1</sup>               | $C_J$  | 280  | -    | pF   |                          |

Note:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

**RATINGS AND CHARACTERISTIC CURVES**

FIG. 1-Typical Forward Current Derating Curve

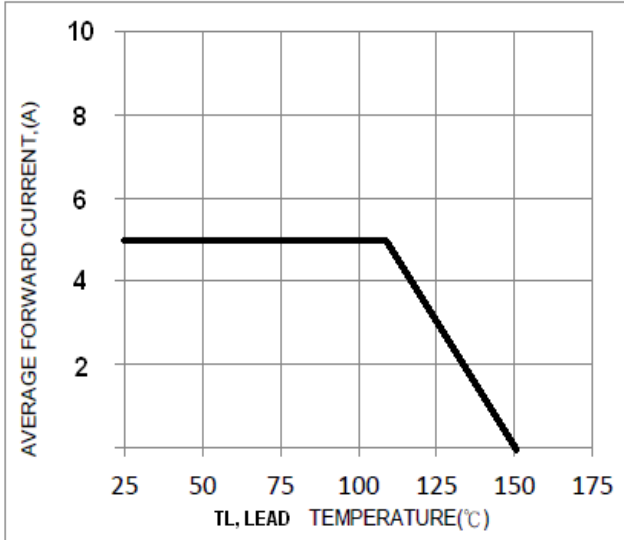


FIG. 2-Typical Forward Characteristics

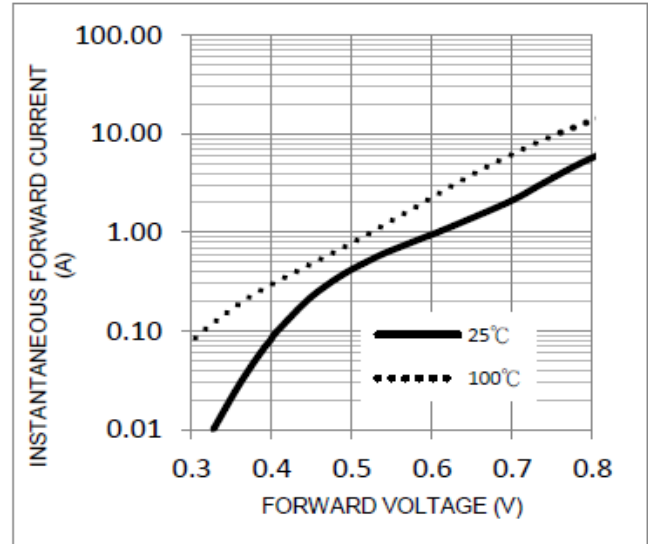


FIG. 3-Maximum Non-Repetitive Forward Surge Current

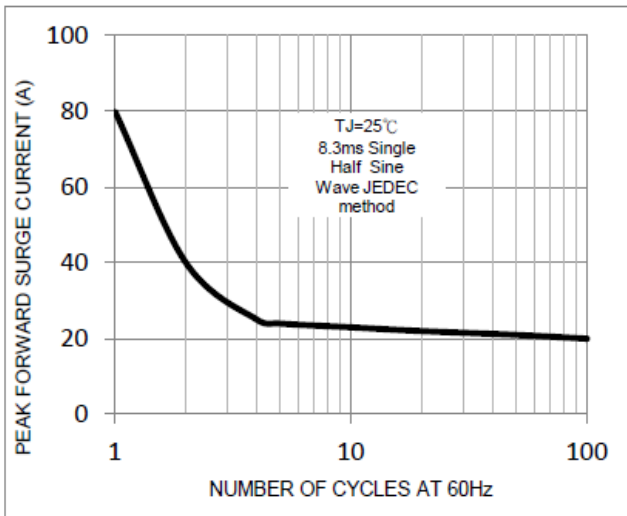


FIG. 4-Typical Reverse Characteristics

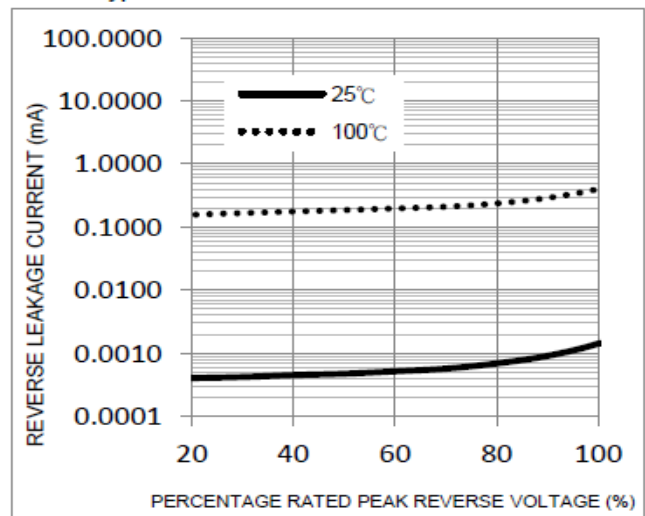


FIG. 5-Typical Junction Capacitance

