

10A, 80V Low Forward Voltage Schottky Rectifier

FEATURES

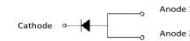
- Trench MOS schottky barrier diode
- Low forward voltage drop
- Low profile - typical body height 1.1 mm
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS compliant
- Halogen-free according to IEC 61249-2-21 definition

TO-277B



RoHS
COMPLIANT

HALOGEN
FREE



MECHANICAL DATA

- Case: TO-277B
- Case material: molding compound meets UL 94V-0 flammability rating

TYPICAL APPLICATION

General purpose use in AC to DC wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment and telecommunication.

MAXIMUM RATINGS

$T_A=25^\circ\text{C}$ unless otherwise noted

| Parameter | Symbol | Value | Unit |
|---|-------------|-------------|------------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 80 | V |
| Average Forward Rectified Current | $I_{F(AV)}$ | 10 | A |
| Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load) | I_{FSM} | 240 | A |
| Operating Junction Temperature Range | T_J | -55 to +150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$ unless otherwise noted

| Parameter | Test Conditions | Symbol | Value | | Unit |
|---|-------------------------|-----------------|-------|------|--------------------|
| | | | Typ. | Max. | |
| Forward Voltage@ $I_F=3\text{A}$ | $T_A=25^\circ\text{C}$ | V_F | 0.43 | 0.46 | V |
| | $T_A=125^\circ\text{C}$ | | 0.39 | 0.42 | |
| Forward Voltage@ $I_F=10\text{A}$ | $T_A=25^\circ\text{C}$ | | 0.54 | 0.57 | |
| | $T_A=125^\circ\text{C}$ | | 0.49 | 0.52 | |
| Reverse Current @ V_{RRM} | $T_A=25^\circ\text{C}$ | I_R | 30 | 70 | μA |
| | $T_A=125^\circ\text{C}$ | | 20 | 50 | mA |
| Typical Thermal Resistance (junction to ambient) | | $R_{\theta JA}$ | 102 | | $^\circ\text{C/W}$ |

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RATINGS AND CHARACTERISTIC CURVES

$T_A=25^\circ\text{C}$ unless otherwise noted

FIG.1: Forward Output Current Derating Curve

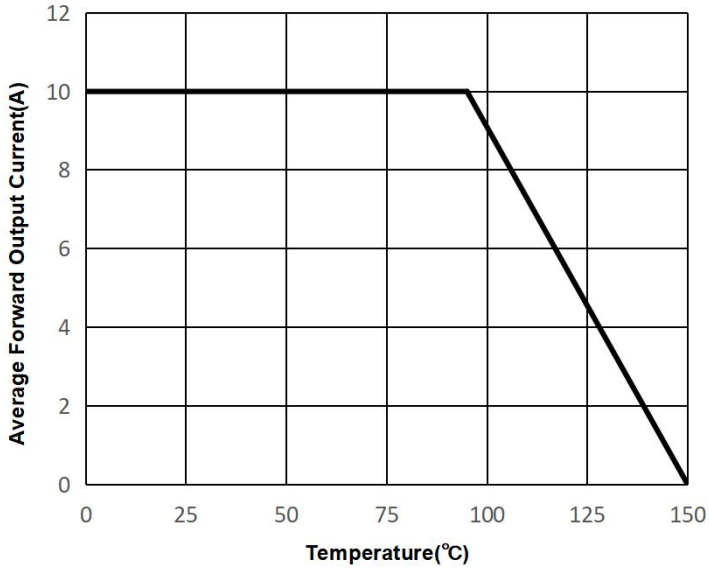


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

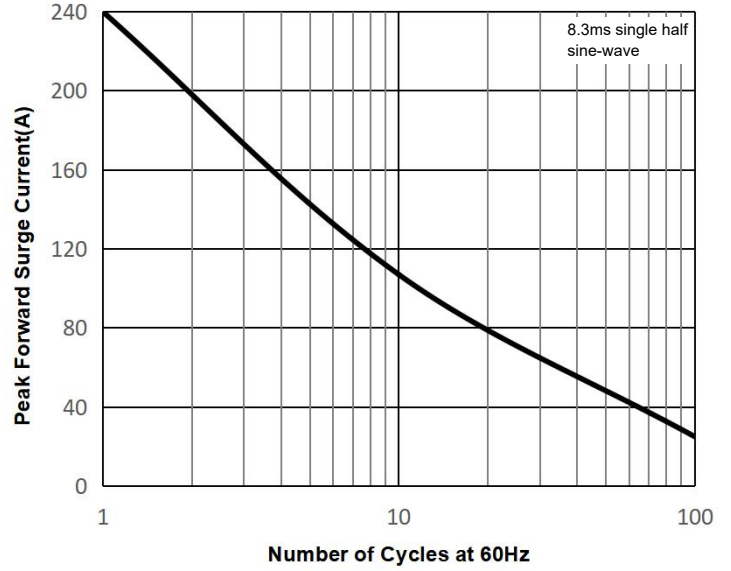


FIG.3: Typical Forward Characteristics

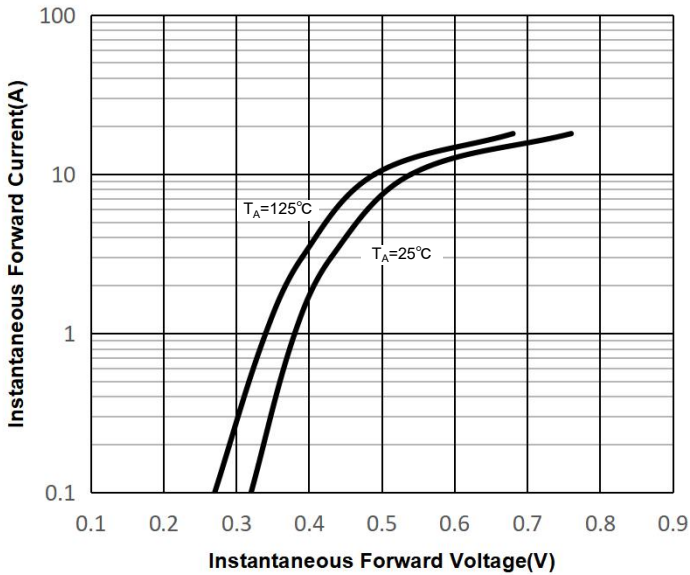
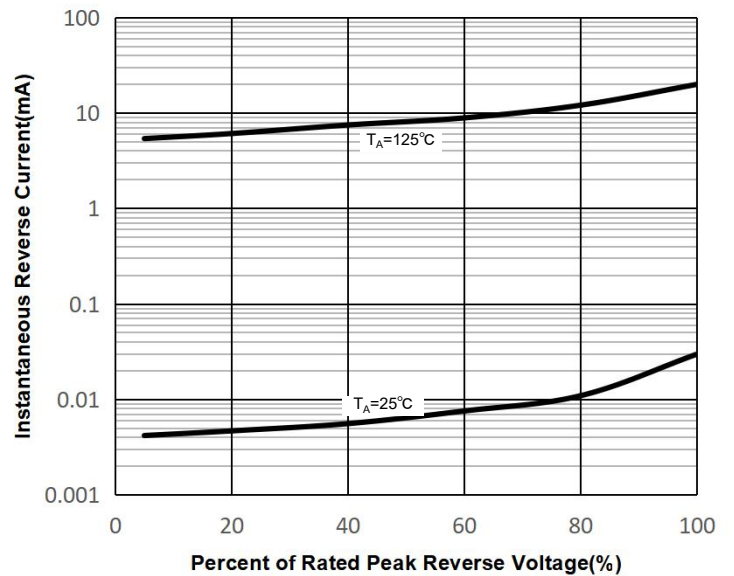
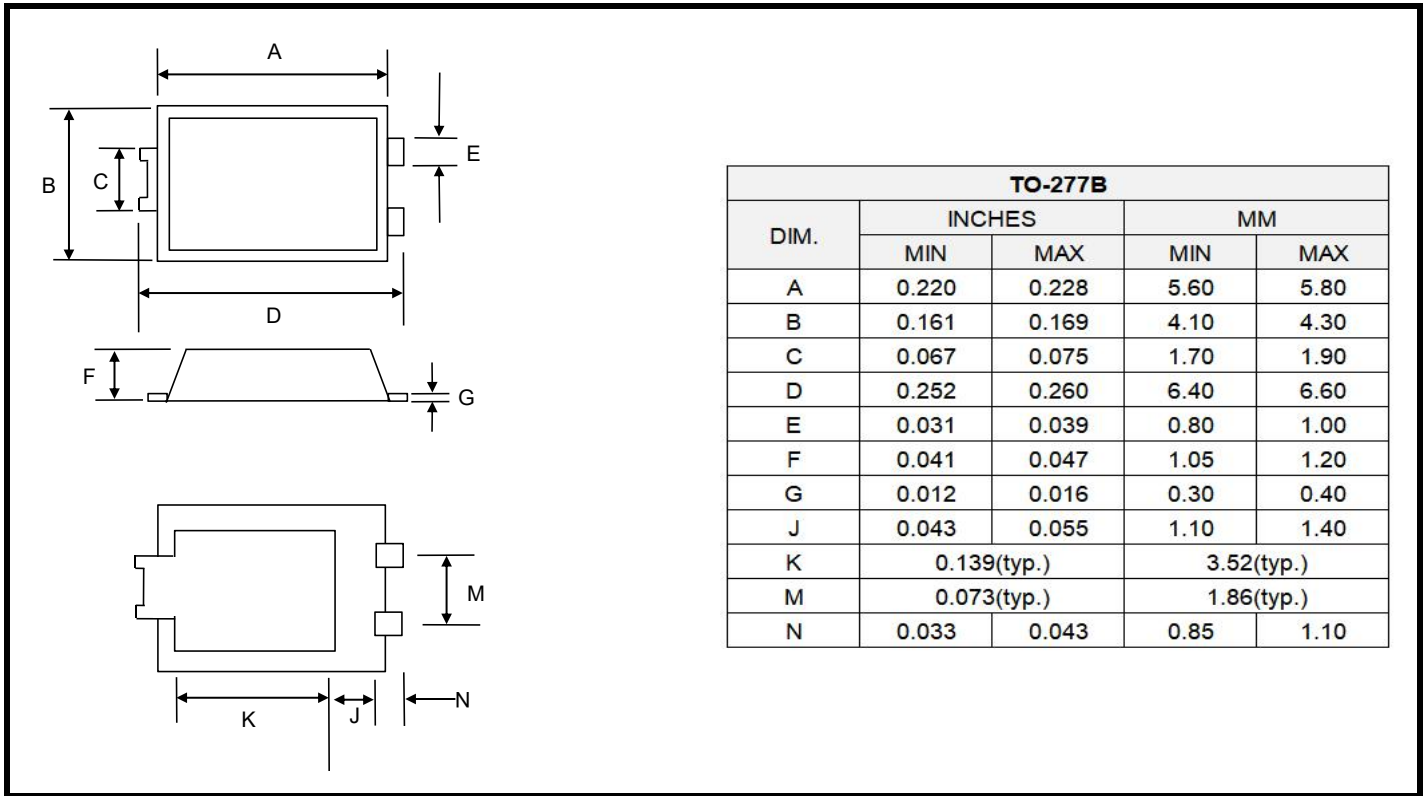


FIG.4: Typical Reverse Characteristics



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PACKAGE OUTLINE DIMENSIONS



PACKING INFORMATION

| Package | Reel(PCS) | Inner Box(PCS) | Carton(PCS) |
|---------|-----------|----------------|-------------|
| TO-277B | 5,000 | 10,000 | 80,000 |