

FEATURES

- ✧ High current capability, low forward voltage
- ✧ Excellent high temperature stability
- ✧ Low power loss, and high efficiency
- ✧ High forward surge capability
- ✧ RoHS compliant, and Halogen free

MACHANICAL DATA

- ✧ Case: TO-277B small outline plastic package
- ✧ Terminal: Matte tin plated, solderable per MIL-STD-750, Method 2026
- ✧ Molding Compound Flammability Rating:UL94-0
- ✧ High temperature soldering guaranteed:
260°C /10second
- ✧ Packed with FRP substrate and epoxy underfilled

ORDERING INFORMATION

- ✧ Device: GSD10E100TSL
- ✧ Package: TO-277B
- ✧ Marking: 10TA0
- ✧ Material: Halogen free
- ✧ Packing: Tape & 13" Reel
- ✧ Quantity per reel: 5,000pcs

APPLICATIONS

- ✧ Switching mode power supply applications
- ✧ Portable equipment battery applications
- ✧ High frequency rectification
- ✧ DC/DC converter
- ✧ Polarity protection applications

PIN CONFIGURATION



PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING (Tamb=25°C, unless otherwise specified)

| Symbol | Parameter | Value | Units |
|-------------------|---|----------|-------|
| V_{RRM} | Repetitive Peak Reverse Voltage | 100 | V |
| $I_{F(AV)}$ | Average Forward Current | 10 | A |
| I_{FSM} | Peak Forward Surge Current, 8.3ms single half sine-wave | 200 | A |
| T_J & T_{STG} | Junction and Storage Temperature | -50~+150 | °C |

ELECTRICAL CHARACTERISTICS (Tamb=25°C, unless otherwise specified)

| Symbol | Parameter | Test Condition | Min | Typ | Max | Units |
|--------------|---|-------------------------------|-----|------|------|-------|
| V_F | Forward Voltage | $I_F = 3A$ $T_a=25^\circ C$ | | 0.43 | | V |
| | | $I_F = 5A$ $T_a=25^\circ C$ | | 0.51 | | V |
| | | $I_F = 10A$ $T_a=25^\circ C$ | | 0.59 | 0.64 | V |
| | | $I_F = 15A$ $T_a=25^\circ C$ | | 0.67 | 0.74 | V |
| | | $I_F = 3A$ $T_a=125^\circ C$ | | 0.36 | | V |
| | | $I_F = 5A$ $T_a=125^\circ C$ | | 0.44 | | V |
| | | $I_F = 10A$ $T_a=125^\circ C$ | | 0.57 | 0.62 | V |
| | | $I_F = 15A$ $T_a=125^\circ C$ | | 0.62 | 0.68 | V |
| V_R | Reverse Breakdown Voltage | $I_R = 0.5mA$ | 100 | 110 | | V |
| I_R | Reverse Leakage Current | $V_R = 100V$ | | 20 | 80 | μA |
| C_J | Junction Capacitance | $f=1MHz, V_R=4V$ | | 1000 | | pF |
| $R_{th(JA)}$ | Thermal Resistance Junction to Ambient (note 1) | | | 98 | | °C/W |
| $R_{th(JL)}$ | Thermal Resistance Junction to Lead (note 1) | | | 19 | | °C/W |

Note 1: Units mounted on recommended P.C.B. 1 oz. pad layout

ELECTRICAL CHARACTERISTICS CURVE

Fig 1 Typical Forward Current Derating Curve

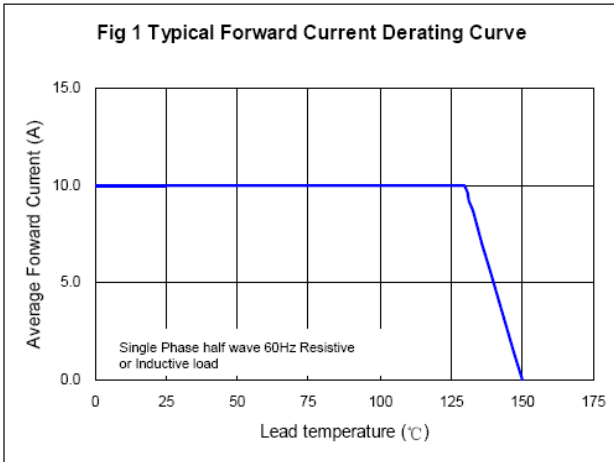


Fig 2 Typical Instantaneous Forward Characteristics

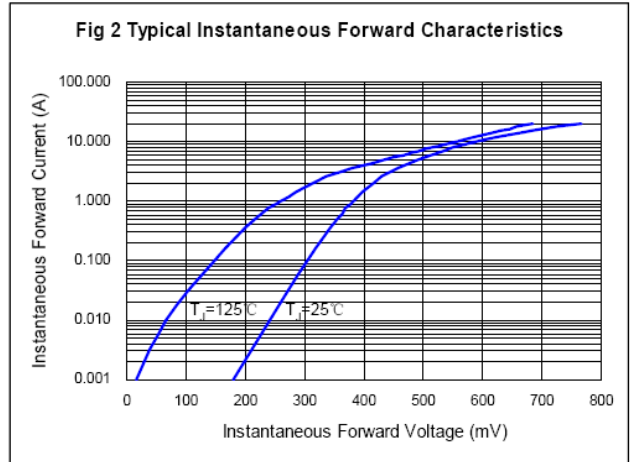


Fig 3 Max. Non-repetitive Forward Surge Current

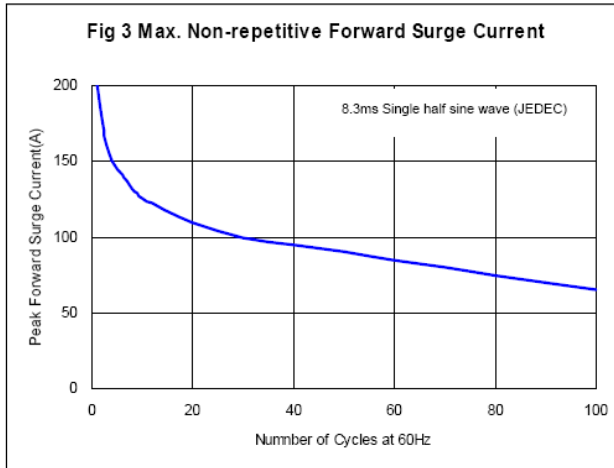


Fig 4 Typical Reverse Characteristics

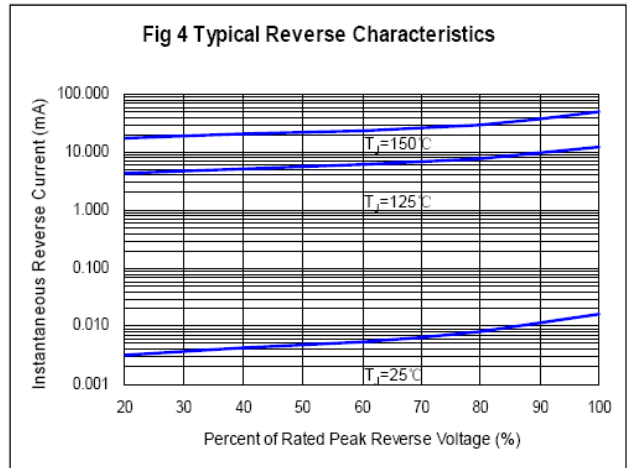
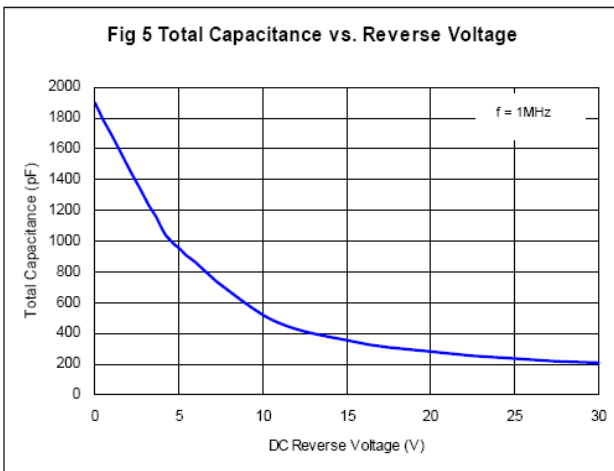
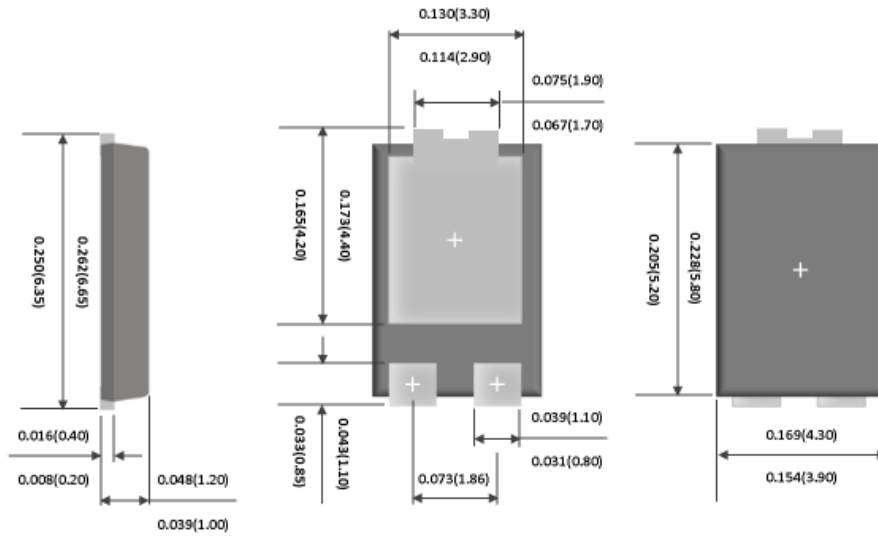


Fig 5 Total Capacitance vs. Reverse Voltage

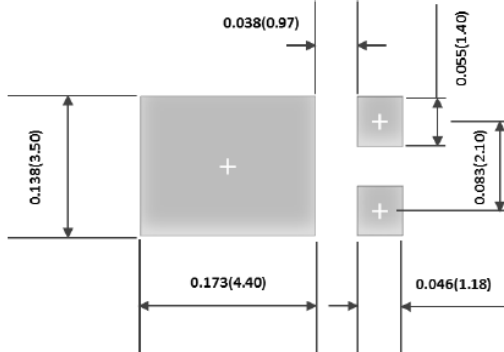


TO-277B PACKAGE OUTLINE DIMENSIONS



unit: mm

FOOT PRINT RECOMMENDATION



unit: mm

MARKING CODE



| 10TA0 | YYYY | XXX |
|-------------|------------|-----------|
| Device name | Trace code | Date code |