

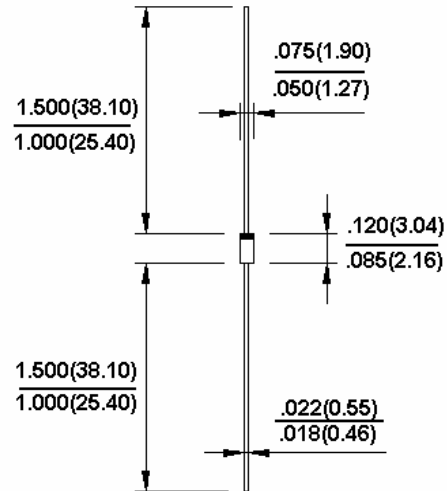
# 1SS133M

## 300mW Hermetically Sealed Glass Switching Diode

### DO-34

### Features

- ◇ Fast switching device( $T_{RR}<4.0nS$ )
- ◇ DO-34 package (JEDEC DO-204)
- ◇ Through-hole device type mounting
- ◇ Hermetically sealed glass
- ◇ Compression bonded construction
- ◇ All external surfaces are corrosion resistant and leads are readily solderable
- ◇ RoHS compliant
- ◇ Solder hot dip Tin (Sn) lead finish
- ◇ Cathode indicated by polarity band



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

#### Maximum Ratings

| Type Number                         | Symbol       | Value        | Units |
|-------------------------------------|--------------|--------------|-------|
| Power Dissipation                   | $P_d$        | 300          | mW    |
| Working Inverse Voltage             | $W_{IV}$     | 90           | V     |
| Average Rectified Current           | $I_o$        | 150          | mA    |
| Non-Repetitive Peak Forward Current | $I_{FM}$     | 450          | mA    |
| Peak Forward surge Current          | $I_{FSURGE}$ | 2            | A     |
| Operating Junction Temperature      | $T_J$        | + 175        | °C    |
| Storage Temperature Range           | $T_{STG}$    | -65 to + 200 | °C    |

#### Electrical Characteristics

| Type Number                            | Symbol   | Min | Max | Units |
|--|----------|-----|-----|-------|
| Breakdown Voltage $I_R=500nA$          | $B_V$    | 80  |     | V     |
| Forward Voltage $I_F=100mA$            | $V_F$    |     | 1.2 | V     |
| Reverse Leakage Current $V_R=80V$      | $I_R$    |     | 500 | nA    |
| Junction Capacitance $V_R=0, f=1.0MHz$ | $C_j$    | -   | 4.0 | pF    |
| Reverse Recovery Time (Note 1)         | $t_{rr}$ | -   | 4.0 | nS    |

Notes: 1. Reverse Recovery Test Conditions:  $I_F=I_R=10mA$ ,  $R_L=100\Omega$ ,  $I_{RR}=1mA$

### RATINGS AND CHARACTERISTIC CURVES (1SS133M)

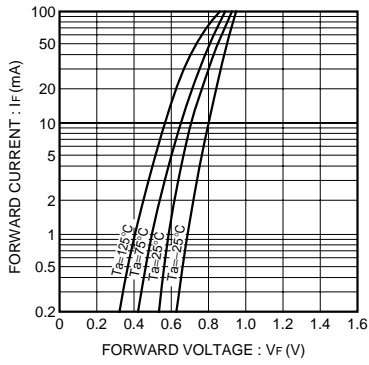


Fig.1 Forward characteristics

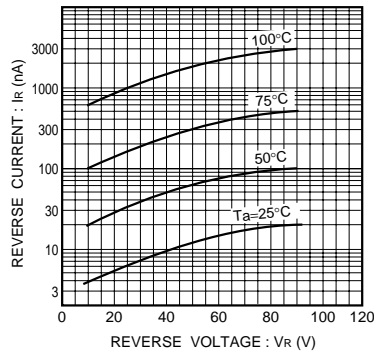


Fig.2 Reverse characteristics

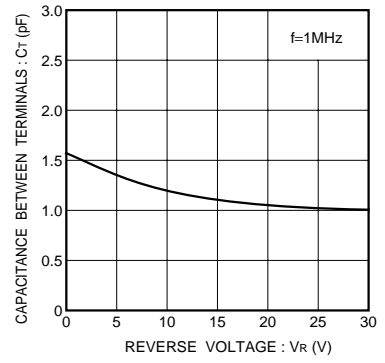


Fig.3 Capacitance between terminals characteristics

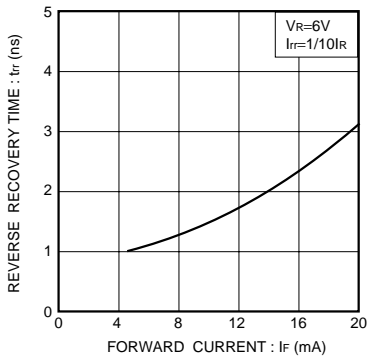


Fig.4 Reverse recovery time characteristics

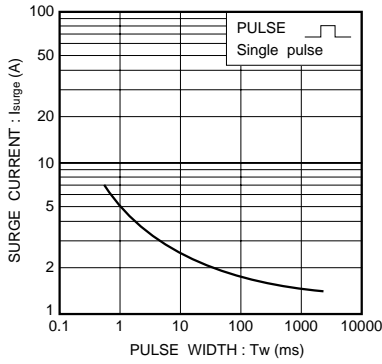


Fig.5 Surge current characteristics

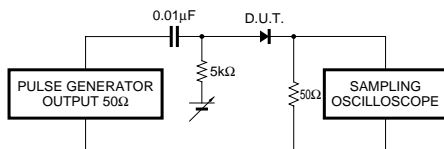


Fig.6 Reverse recovery time ( $t_{rr}$ ) measurement circuit