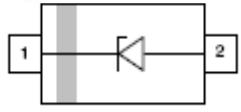
# TRR®

# 1N4007WS

## ■ Features

- Fast Switching Speed
- For General Purpose Switching Applications.
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion




**SOD-323**

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%.

| Catalog Number | SYMBOLS | 4001 | 4002 | 4003 | 4004 | 4005 | 4006 | 4007 | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | VOLTS |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum average forward rectified current at Tc=125℃ | $I_{(AV)}$ | 1.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 25 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC reverse current $T_A$=25℃<br>at rated DC blocking voltage $T_A$=100℃ | $I_R$ | 5.0<br>50.0 | | | | | | | μA |
| Typical thermal resistance (NOTE 1) | $R_{\theta JA}$ | 55 | | | | | | | °C/W |
| Typical reverse recovery time (NOTE 2) | $T_{rr}$ | 1800 | | | | | | | Ns |
| Typical junction capacitance (NOTE 3) | $C_J$ | 5 | | | | | | | pF |
| Operating junction and storage temperature range | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | °C |

NOTE

( 1 ) P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.

( 2 ) Measured with $I_F$=0.5A,$I_R$ =1A, $I_{rr}$=0.25A

( 3 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

**Fig.1 Forward Current Derating Curve**

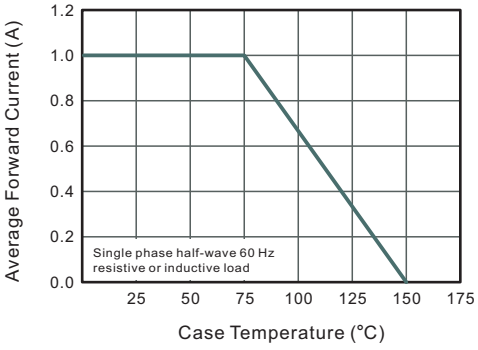



**Fig.2 Typical Instaneous Reverse Characteristics**

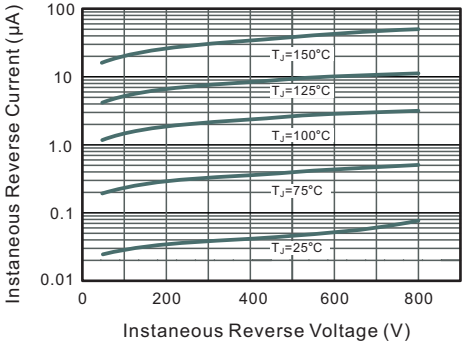



**Fig.3 Typical Forward Characteristic**

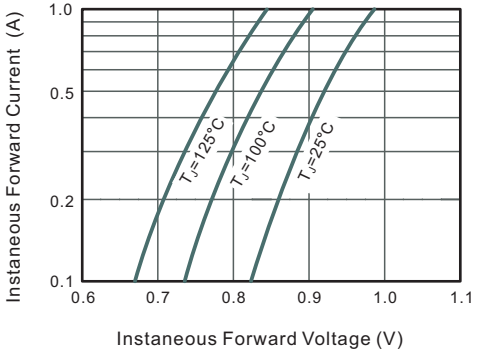



**Fig.4 Typical Junction Capacitance**

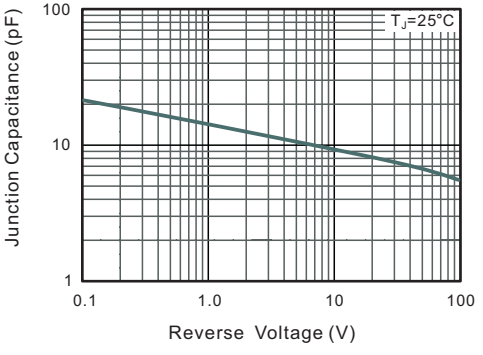
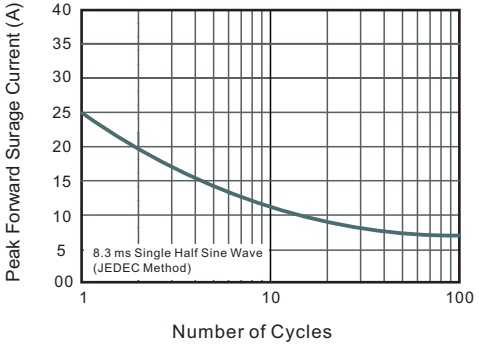
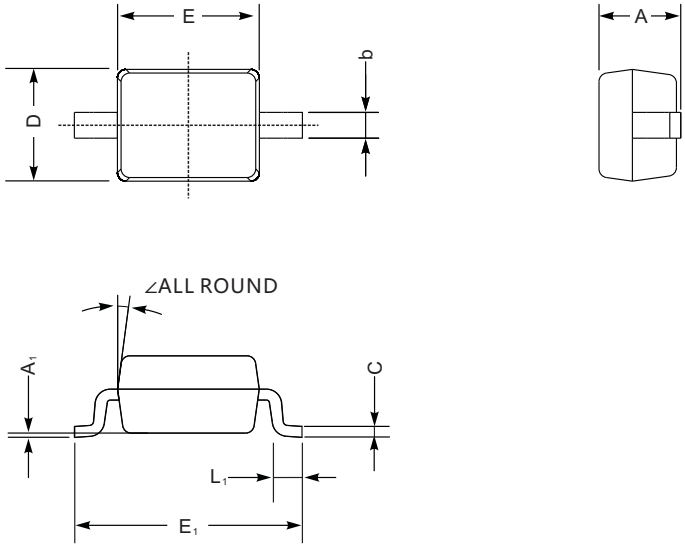



**Fig.5 Maximum Non-Repetitive Peak Forward Surage Current**




The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!

## ■ SOD-323




SOD-323 mechanical data

| UNIT | | A | C | D | E | $E_1$ | b | $L_1$ | $A_1$ | ∠ |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.1 | 0.15 | 1.4 | 1.8 | 2.75 | 0.4 | 0.45 | 0.2 | 9° |
| | min | 0.8 | 0.08 | 1.2 | 1.4 | 2.55 | 0.25 | 0.2 | — | |
| mil | max | 43 | 5.9 | 55 | 70 | 108 | 16 | 16 | 8 | |
| | min | 32 | 3.1 | 47 | 63 | 100 | 9.8 | 7.9 | — | |

## ■ The recommended mounting pad size