

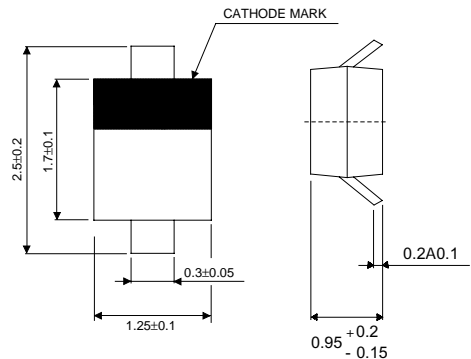
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

SOD-323 (SC-76)

### FEATURES

- Fast switching speed
- Ultra-Small surface mount package
- For general purpose switching applications
- High conductance
- Also available in lead free version



Marking: T5

### MECHANICAL DATA

- Case: SOD-323, Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Metallurgically bonded construction
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.004 grams

### MAXIMUM RATINGS

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

| TYPE NUMBER  | SYMBOL          | VALUE        | UNITS           |
|--|-----------------|--------------|-----------------|
| Non-Repetitive Peak Reverse Voltage  | $V_{RM}$        | 100          | V               |
| Peak Repetitive Reverse Voltage  | $V_{RRM}$       | 75           | V               |
| Working Peak Reverse Voltage   | $V_{RWM}$       |              |                 |
| DC Blocking Voltage  | $V_R$           |              |                 |
| RMS Reverse Voltage  | $V_{R(RMS)}$    | 53           | V               |
| Forward Continuous Current   | $I_{FM}$        | 500          | mA              |
| Average Rectified Output Current   | $I_O$           | 250          | mA              |
| Non-Repetitive Peak Forward Surge Current @ t = 1.0 $\mu$ s<br>@ t = 1.0 s | $I_{FSM}$       | 4.0          | A               |
|  |                 | 2.0          |                 |
| Power Dissipation (Note 1)   | $P_D$           | 200          | mW              |
| Thermal Resistance Junction to Ambient Air (Note 1)                        | $R_{\theta JA}$ | 625          | $^{\circ}C / W$ |
| Operating and Storage Temperature Range                                    | $T_J, T_{STG}$  | - 65 ~ + 150 | $^{\circ}C$     |

## ● ELECTRICAL CHARACTERISTICS (Ta=25°C)

| TYPE NUMBER                   | SYMBOL   | Min. | Max.                          | UNITS         | Test Condition  |
|-------------------------------|----------|------|-------------------------------|---------------|---|
| Reverse Breakdown Voltage     | $V_{RM}$ | 75   | -                             | V             | $I_R = 1.0\mu A$  |
| Forward Voltage (Note 2)      | $V_{FM}$ | -    | 0.720<br>0.855<br>1.0<br>1.25 | V             | $I_F = 5.0mA$<br>$I_F = 10mA$<br>$I_F = 100mA$<br>$I_F = 150mA$   |
| Peak Reverse Current (Note 2) | $I_{RM}$ | -    | 2.5<br>25                     | $\mu A$<br>nA | $V_R = 75V, T_J = 25^\circ C$<br>$V_R = 25V, T_J = 25^\circ C$    |
| Total Capacitance             | $C_T$    | -    | 4.0                           | pF            | $V_R = 0, f = 1.0MHz$   |
| Reverse Recovery Time         | $t_{rr}$ | -    | 4.0                           | ns            | $I_F = I_R = 10mA,$<br>$I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ |

NOTES:

1. Part mounted on FR-4 PC board with recommended pad layout,
2. Short duration test pulse used to minimize self-heating effect.

## ● RATING AND CHARACTERISTIC CURVES

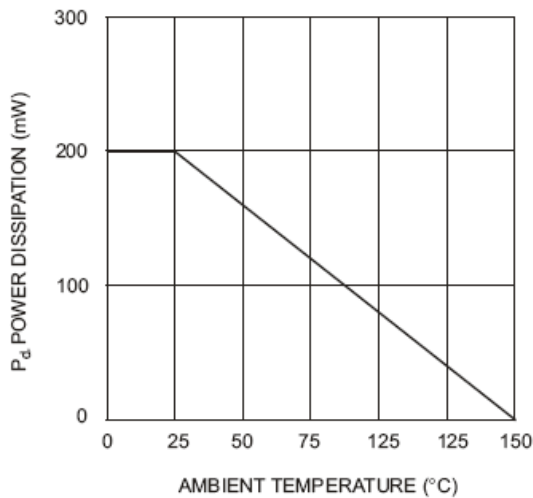


Fig. 1 Forward Current Derating Curve

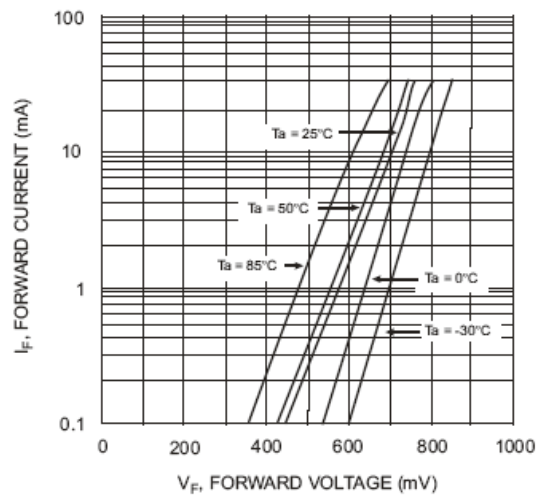


Fig. 2 Typical Forward Characteristics

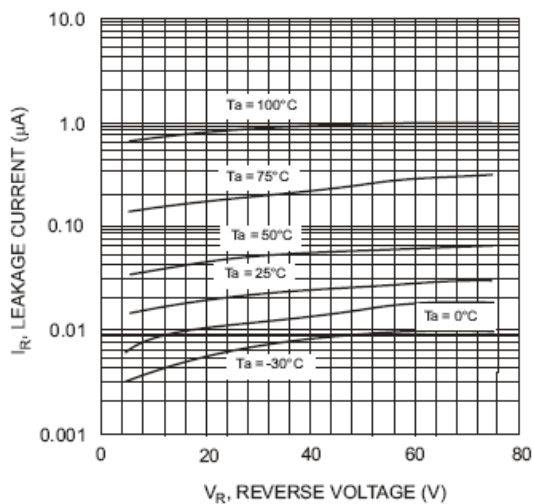


Fig. 3 Typical Reverse Characteristics

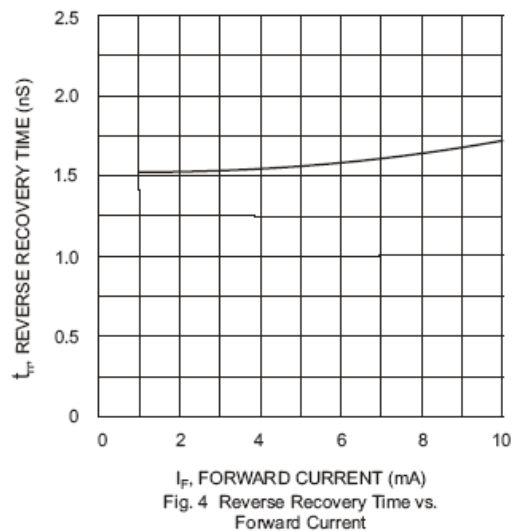


Fig. 4 Reverse Recovery Time vs. Forward Current