

High-speed rectifier diode

1SR124-400A

●Applications

High speed rectification

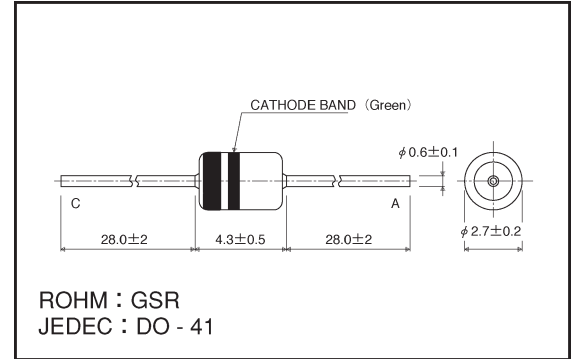
●Features

- 1) Glass sealed envelope. (JEDEC: DO-41)
- 2) High speed. ($t_{rr}=0.4\mu\text{s}$ Max.)
- 3) Assures 400V while maintaining high speed.

●Construction

Silicon diffusion junction

●External dimensions (Units: mm)



●Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Limits | Unit |
|-------------------------------|-----------|----------|------------------|
| Absolute peak reverse voltage | V_{RSM} | 500 | V |
| Peak reverse voltage | V_{RM} | 400 | V |
| Mean rectifying current | I_O | 1 | A |
| Peak forward surge current * | I_{FSM} | 30 | A |
| Junction temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -65~+175 | $^\circ\text{C}$ |

*60 Hz for 1 \varnothing

●Electrical characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|-----------------------|----------|------|------|------|---------------|---|
| Forward voltage | V_F | — | 1.14 | 1.3 | V | $I_F=1\text{A}$ |
| Reverse current | I_R | — | 0.20 | 10 | μA | $V_R=400\text{V}$ |
| Reverse recovery time | t_{rr} | — | 0.2 | 0.4 | μs | $I_F=I_R=10\text{mA}$, $I_{rr}=1\text{mA}$ |

●Electrical characteristic curves (Ta = 25°C unless specified otherwise)

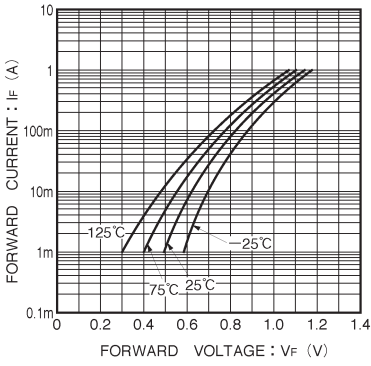


Fig. 1 Forward characteristics

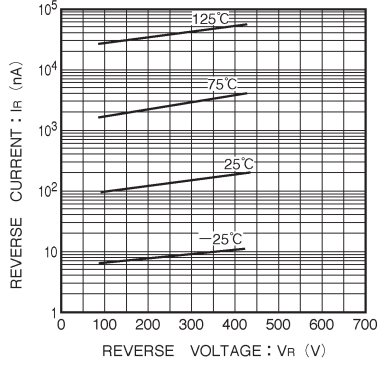


Fig. 2 Reverse characteristics

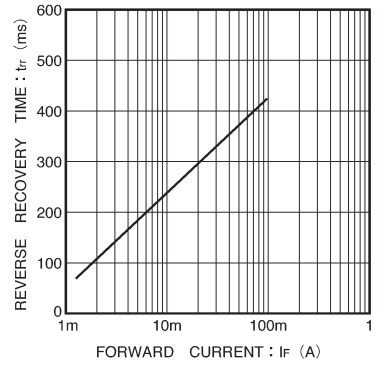


Fig. 3 Reverse recovery time characteristics

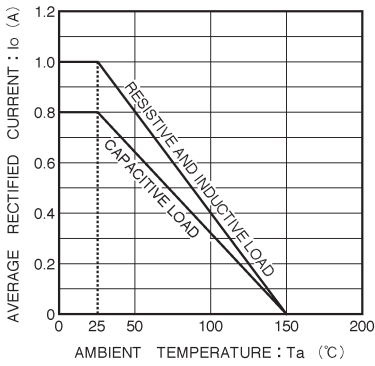


Fig. 4 Derating curve

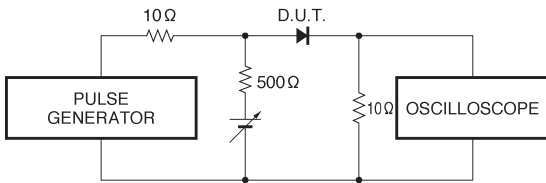


Fig. 5 Reverse recovery time (tr) measurement circuit