

High-speed rectifier diode

1SR124-400A

●Applications

High speed rectification

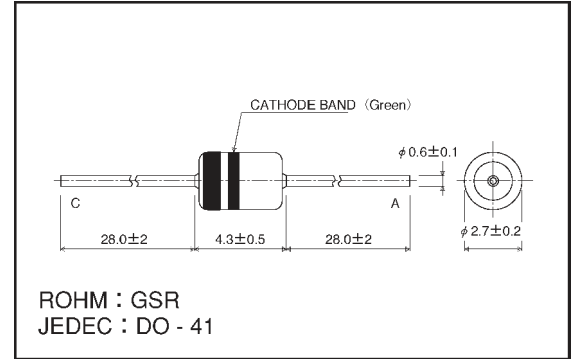
●Features

- 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}	$-65 \sim +175$	$^\circ\text{C}$

*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)

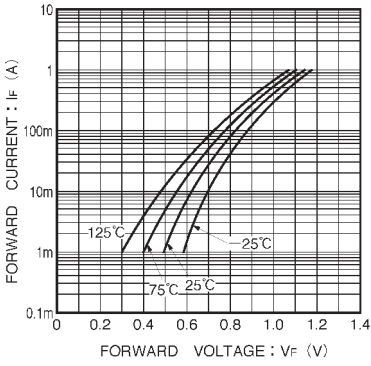


Fig. 1 Forward characteristics

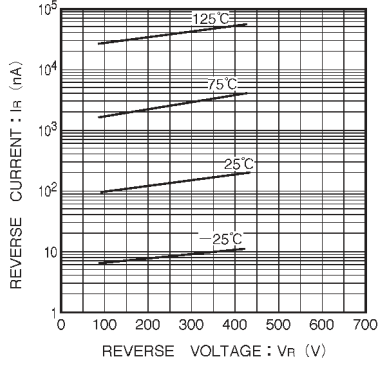


Fig. 2 Reverse characteristics

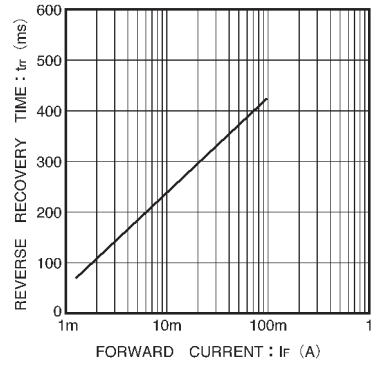


Fig. 3 Reverse recovery time characteristics

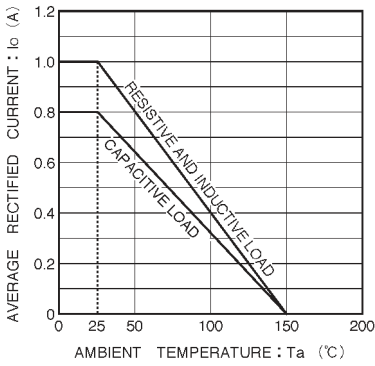


Fig. 4 Derating curve

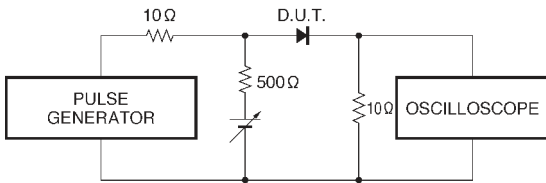


Fig. 5 Reverse recovery time (tr) measurement circuit