

Schottky barrier diode

RB051L-40

●Applications

High frequency rectification
For switching power supply

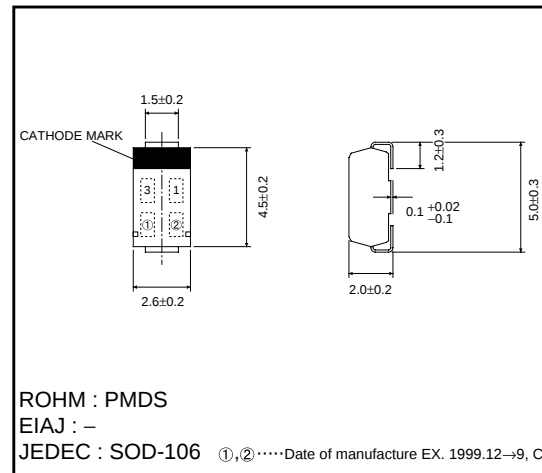
●Features

- 1) Compact power mold type. (PMDS)
- 2) Ultra low V_F . ($V_F=0.29V$ Typ. at 1A)
- 3) $V_{RM}=40V$ guaranteed.

●Construction

Silicon epitaxial planar

●External dimensions (Units : mm)



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

Parameter	Symbol	Limits	Unit
Peak reverse voltage	V_{RM}	40	V
DC reverse voltage	V_R	20	V
Mean rectifying current *	I_o	3.0	A
Peak forward surge current (60Hz · 1 ϕ)	I_{FSM}	70	A
Junction temperature	T_j	125	$^\circ C$
Storage temperature	T_{stg}	-40~+125	$^\circ C$

* T_L 90 $^\circ C$ Max. 180 $^\circ$ half sine wave when mounted on an alumina substrate
(82 × 30 × 1.0 mm)

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

Parameter	Symbol	Typ.	Max.	Unit	Conditions
Forward voltage	V_{F1}	-	0.35	V	$I_F=1.0A$
	V_{F2}	-	0.45	V	$I_F=3.0A$
Reverse current	I_{R1}	-	1.0	mA	$V_R=20V$
	I_{R2}	-	150	μA	$V_R=15V$

Diodes

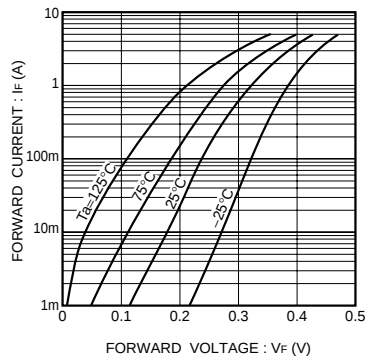
●Electrical characteristic curves ($T_a = 25^\circ\text{C}$)

Fig. 1 Forward characteristics

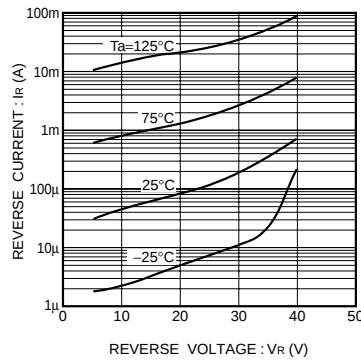


Fig. 2 Reverse characteristics

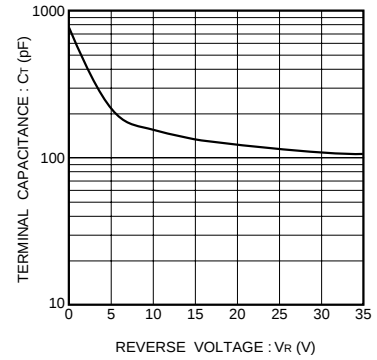


Fig. 3 Capacitance between terminals characteristics

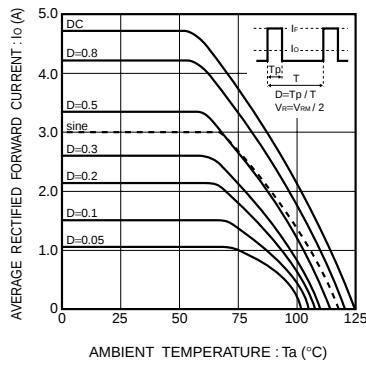
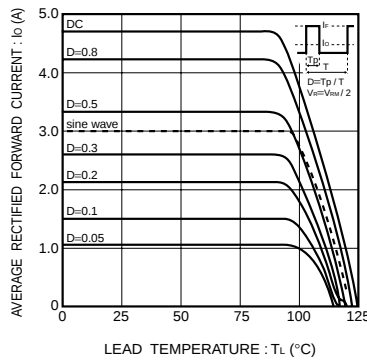
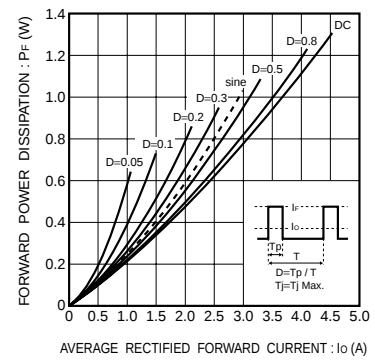
Fig. 4 Derating curve ($I_o - T_a$)Fig. 5 Derating curve ($I_o - T_L$)
(When mounted on alumina PCBs)

Fig. 6 Forward power dissipation characteristics

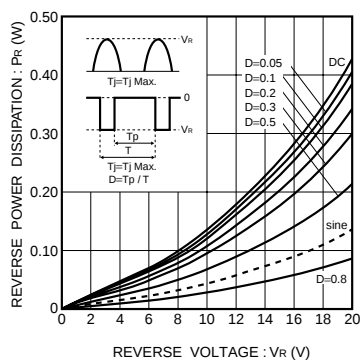
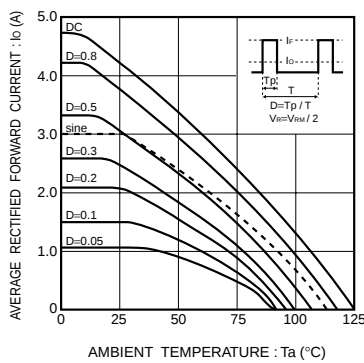


Fig. 7 Reverse power dissipation characteristics

Fig. 8 Derating curve
(when mounted on a glass epoxy PCBs board)