

Schottky barrier diode

RB050L-40

●Applications

For high-frequency rectification
For switching power supplies

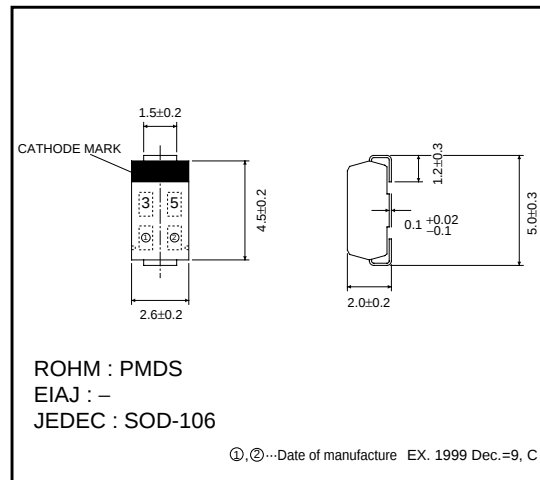
●Features

- 1) Compact power-mold type. (PMDS)
- 2) $I_o=3A$ guaranteed at this size.
- 3) Low I_R . ($I_R=16\mu A$ Typ.)

●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	40	V
Mean rectifying current *1	I_o	3.0	A
Peak surge current *2	I_{FSM}	70	A
Junction temperature	T_j	125	$^\circ C$
Storage temperature	T_{stg}	-40~+125	$^\circ C$

*1 When mounted on an alumina board (82×30×1.0mm), 180° Half sine wave

*2 60Hz, 1

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

Parameter	Symbol	Max.	Unit	Conditions
Forward voltage	V_{F1}	0.55	V	$I_F=3.0A$
	V_{F2}	0.50	V	$I_F=1.5A$
Reverse current	I_R	1.0	mA	$V_R=40V$
Thermal resistance	θ_{j-a}	90	$^\circ C/W$	When mounted on an alumina board.
	θ_{j-a}	120	$^\circ C/W$	When mounted on a glass epoxy board.
	θ_{j-l}	25	$^\circ C/W$	When mounted on an alumina board.

Diodes

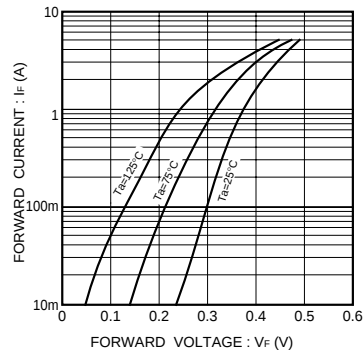
●Electrical characteristic curves ($T_a = 25^\circ\text{C}$)

Fig. 1 Forward temperature characteristics

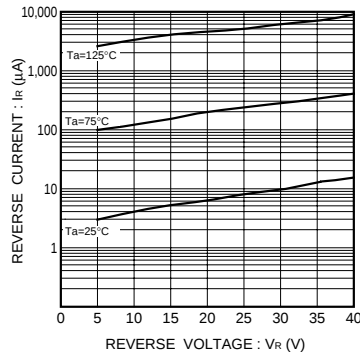


Fig. 2 Reverse temperature characteristics

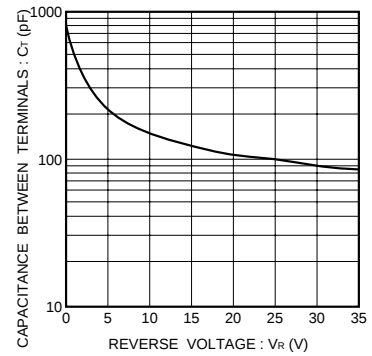


Fig. 3 Capacitance between terminals characteristics

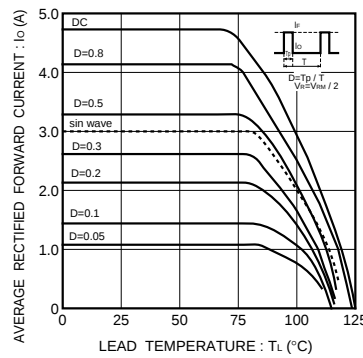


Fig. 4 Derating curve

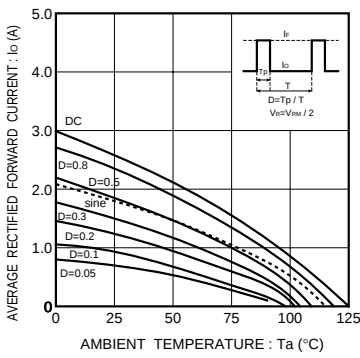


Fig. 5 Derating curve (when mounted on a glass epoxy board)

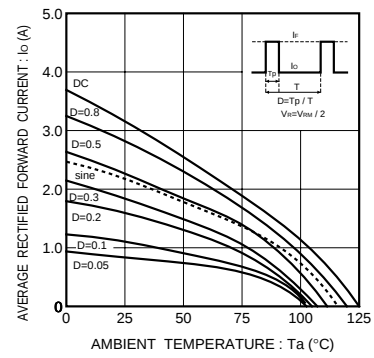


Fig. 6 Derating curve (when mounted on an alumina board)

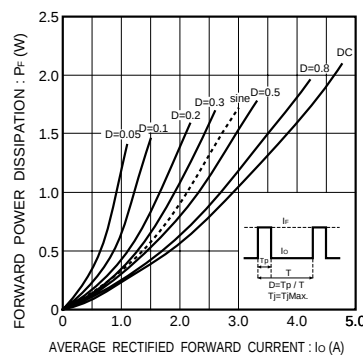


Fig. 7 Power dissipation characteristics

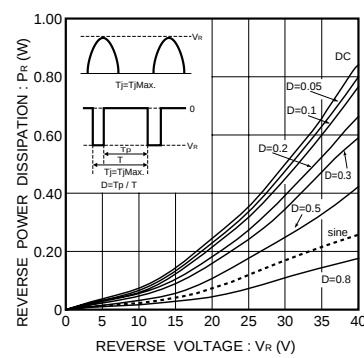


Fig. 8 Reverse power dissipation