

# High frequency rectifier schottky barrier diode

## RB050L-40

### ●Applications

For high-frequency rectification  
For switching power supplies

### ●Features

- 1) Compact power-mold type. (PMDS (SOD-106))
- 2)  $I_o = 3A$  achieved at this size.
- 3) Low reverse current. (typical capability :  $16\mu A$ )

### ●Construction

Silicon epitaxial planar

### ●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	$T_{stg}$	$-40 \sim +125$	$^\circ C$

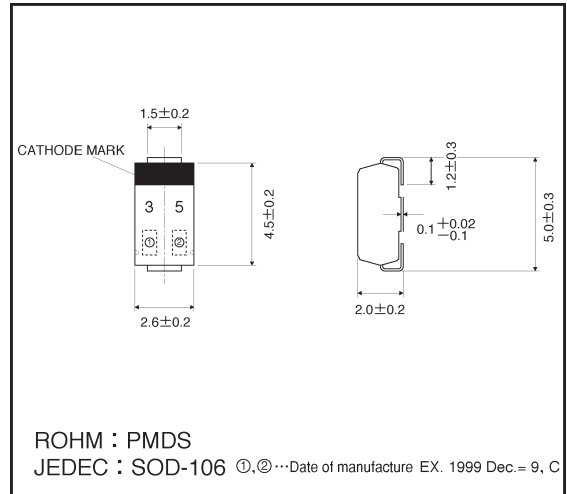
\*1 When mounted on an alumina board (82×30×1.0mm) , 180° Half sine wave

\*2 60Hz, 1  $\varnothing$

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

Parameter	Symbol	Max.	Unit	Conditions
Forward voltage	$V_{F1}$	0.50	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	$\theta_{j-a}$	90	$^\circ C/W$	When mounted on an alumina board.
	$\theta_{j-g}$	120	$^\circ C/W$	When mounted on a glass epoxy board.
	$\theta_{j-l}$	25	$^\circ C/W$	When mounted on an alumina board.

### ●External dimensions (Units: mm)



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

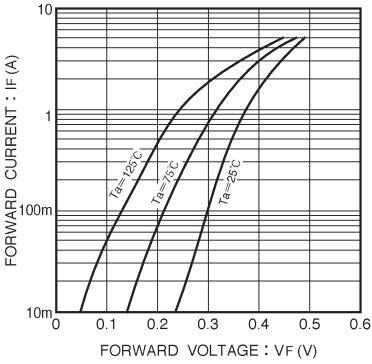


Fig. 1 Forward temperature characteristics

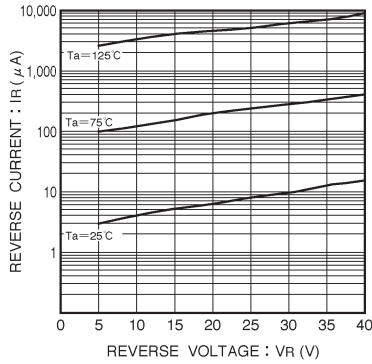


Fig. 2 Reverse temperature characteristics

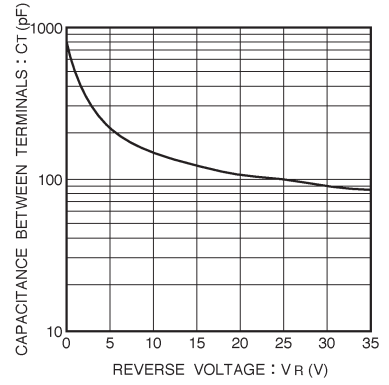


Fig. 3 Capacitance between terminals characteristics

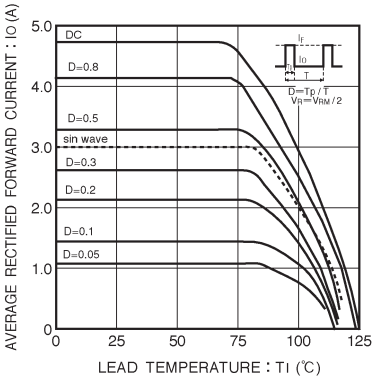


Fig. 4 Derating curve

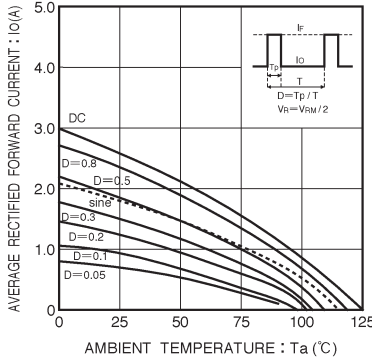


Fig. 5 Derating curve (when mounted on an alumina board)

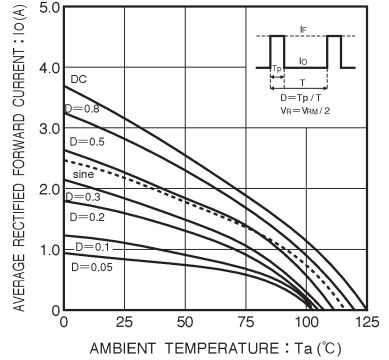


Fig. 6 Derating curve (when mounted on a glass epoxy board)

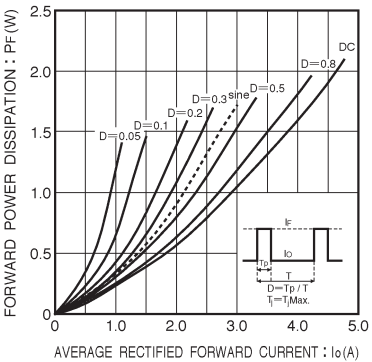


Fig. 7 Power dissipation characteristics

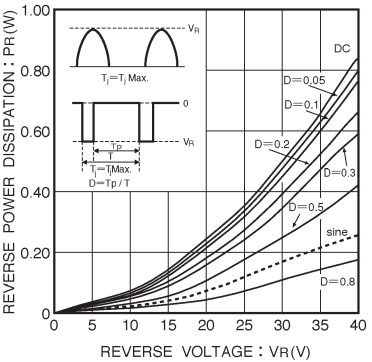


Fig. 8 Reverse power dissipation