

## Schottky Barrier Rectifier

### General Description

The SDB30A40 surface mounted Schottky rectifier has been designed for applications requiring low forward drop and very small foot prints on PC boards. Typical applications are in disk drives, switching power supplies, converters, free-wheeling diodes, battery charging, and reverse battery protection.



SOD-106

### Features and Benefits

- Low forward drop voltage and low reverse leakage current
- Low power rectified
- “Green” device and RoHS compliant device
- Available in full lead (Pb)-free device



### Applications

- Portable equipment battery applications
- Switching mode power supplies applications

### Ordering Information

Part Number	Marking Code	Package	Packaging
SDB30A40	3A40	SOD-106	Tape & Reel

### Marking Information



3A40 = Specific Device Code

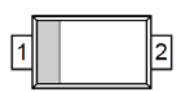
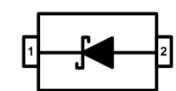
YWW = Year & Week Code Marking

-. Y = Year Code

-. WW = Week Code

■ = Color band denote cathode

### Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode		
2	Anode		

**Absolute Maximum Ratings** ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Reverse voltage	$V_R$	40	V
Forward current	$I_F$	3	A
Non-repetitive peak forward current (60Hz)	$I_{FSM}$	70	A
Junction temperature	$T_J$	150	$^{\circ}\text{C}$
Storage temperature range	$T_{stg}$	-55 ~ 150	$^{\circ}\text{C}$

**Electrical Characteristics** ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$ <sup>1)</sup>	$I_F=3\text{A}$	-	0.5	0.55	V
Reverse current	$I_R$ <sup>2)</sup>	$V_R=40\text{V}$	-	-	0.5	mA
Thermal Resistance	$R_{th(j-a)}$ <sup>3)</sup>	Junction to ambient	-	-	76	$^{\circ}\text{C}/\text{W}$
Total capacitance	$C_T$	$V_R=10\text{V}, f=1\text{MHz}$	-	110	-	pF

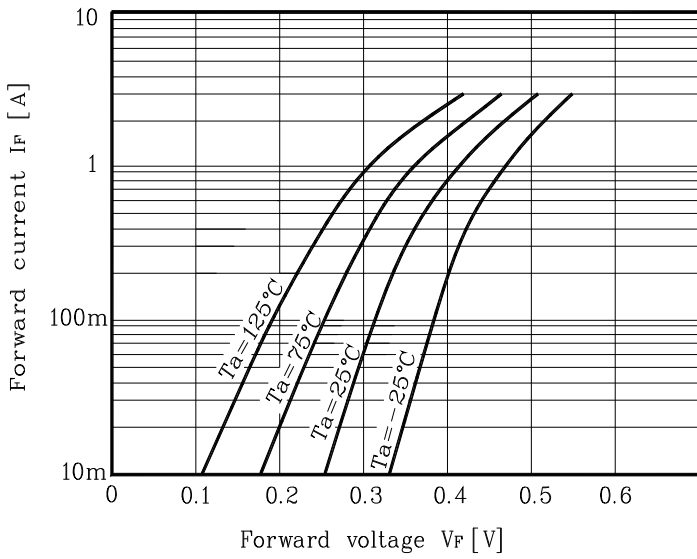
<sup>1)</sup> Pulse test:  $t_p \leq 380\mu\text{s}$ , Duty cycle  $\leq 2\%$

<sup>2)</sup> Pulse test:  $t_p \leq 5\text{ms}$ , Duty cycle  $\leq 2\%$

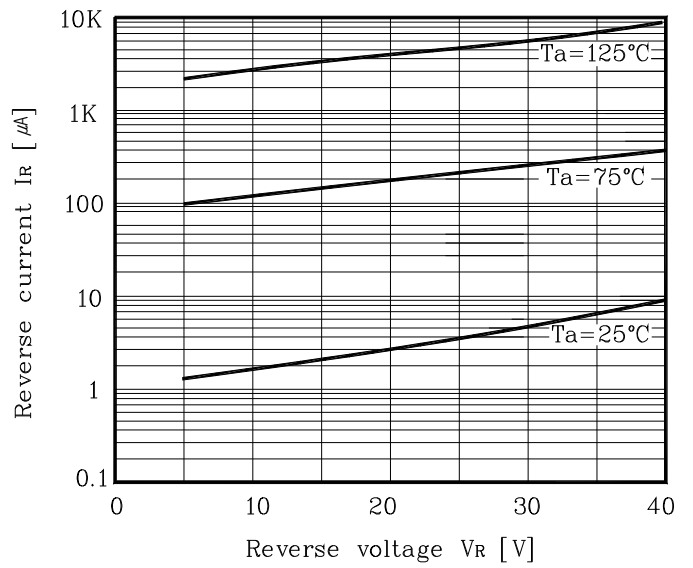
<sup>3)</sup> Device mounted on glass epoxy PCB (recommanderable minimum solder land)

## Rating and Characteristic Curves

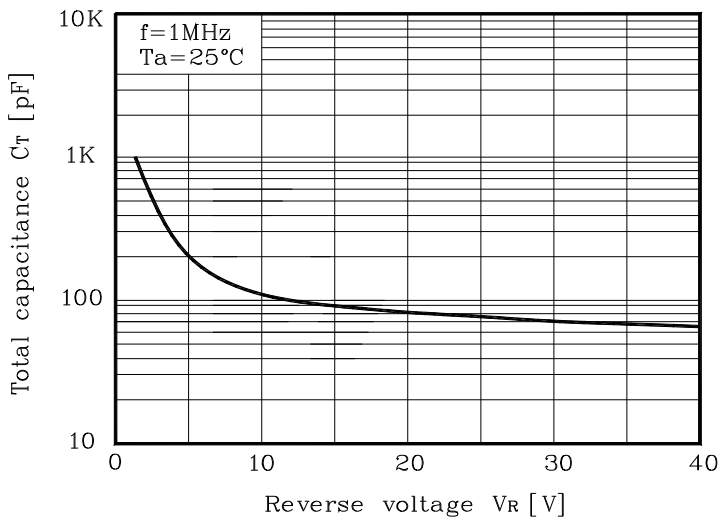
**Fig. 1  $I_F - V_F$**



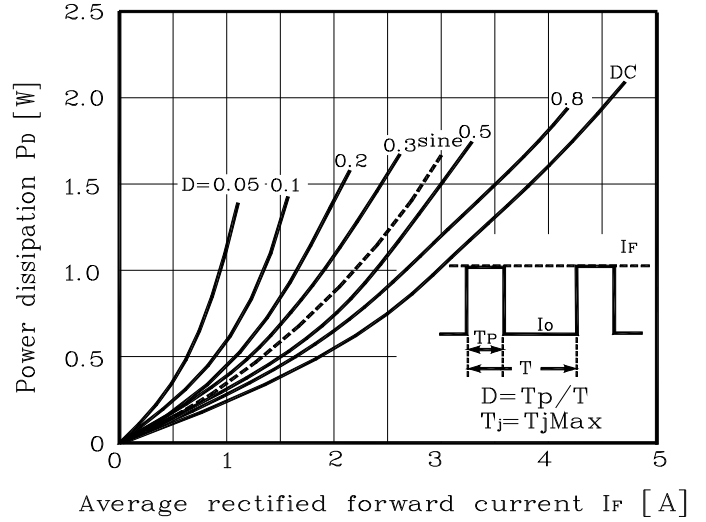
**Fig. 2  $I_R - V_R$**



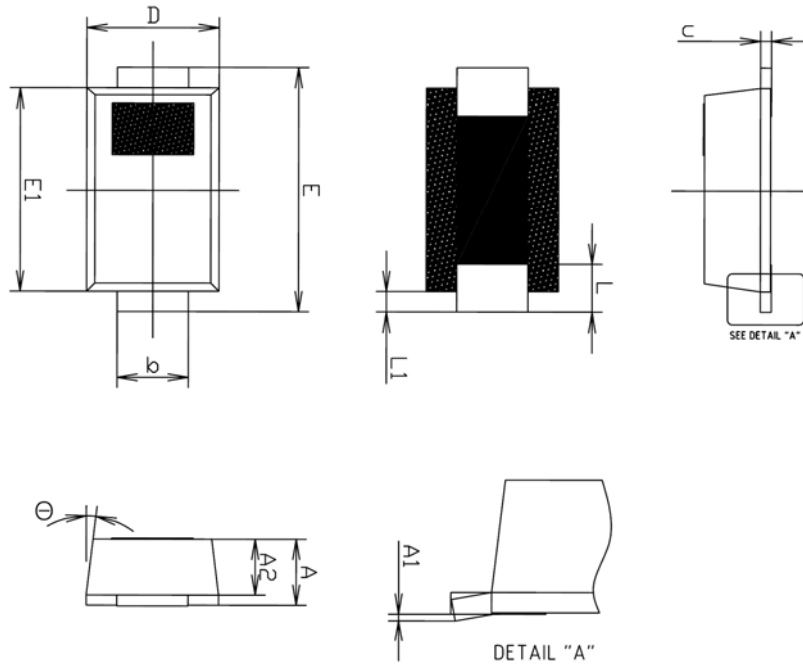
**Fig. 3  $C_T - V_R$**



**Fig. 4  $P_D - I_F$**

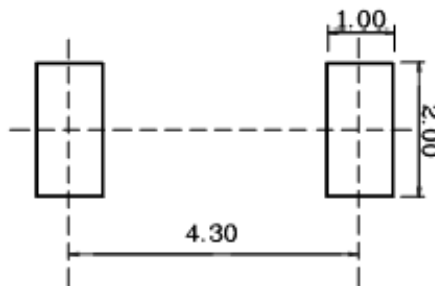


Package Outline Dimensions



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.25	1.30	1.35	
A1	0.00	—	0.10	
A2	1.05	1.10	1.15	
b	1.35	1.42	1.49	
c	0.17	0.22	0.27	
D	2.50	2.60	2.70	
E	4.60	4.80	5.00	
E1	3.90	4.00	4.10	
L	0.79	0.94	1.09	
L1	0.30	0.40	0.50	
$\ominus$	4°	—	10°	

※ Recommend PCB solder land (Unit: mm)



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