

## Schottky Barrier Rectifier

### General Description

The SDB10A40 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
SDB10A40	1A40	SOD-106	Tape & Reel

### Marking Information



1A40 = Specific Device Code

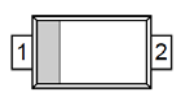
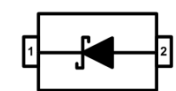
YWW = Year & Week Code Marking

-. 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
Peak reverse voltage	$V_{RM}$	40	V
Reverse voltage	$V_R$	40	V
Forward current	$I_F$	1	A
Non-repetitive peak forward current	$I_{FSM}$	30	A
Junction temperature	$T_j$	150	$^{\circ}\text{C}$
Storage temperature	$T_{stg}$	-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 <sup>1)</sup>	$V_F$ <sup>1)</sup>	$I_F=1\text{A}$	-	0.5	0.55	V
Reverse leakage current <sup>2)</sup>	$I_R$ <sup>2)</sup>	$V_R=40\text{V}$	-	-	200	$\mu\text{A}$
Total capacitance	$C_T$	$V_R=10\text{V}, f=1\text{MHz}$	-	50	-	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  $\leq 2\%$

Rating and Characteristic Curves

Fig. 1 Forward Characteristics

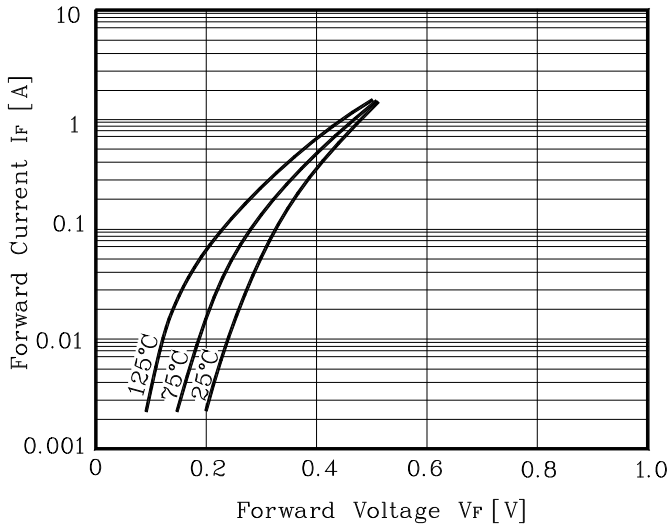


Fig. 2 Reverse Characteristics

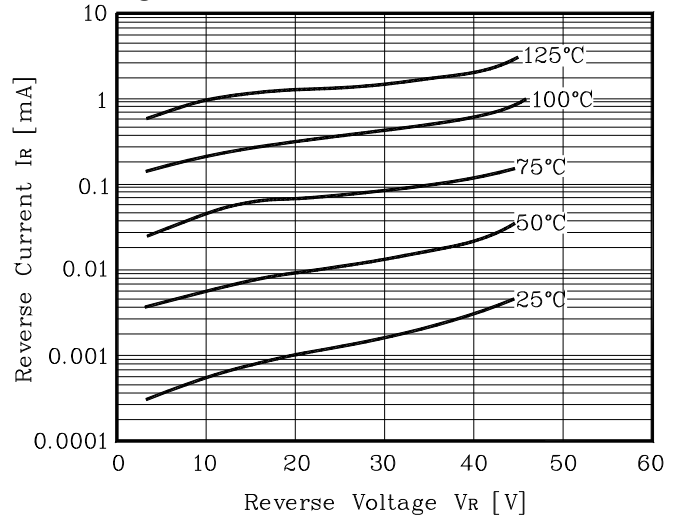
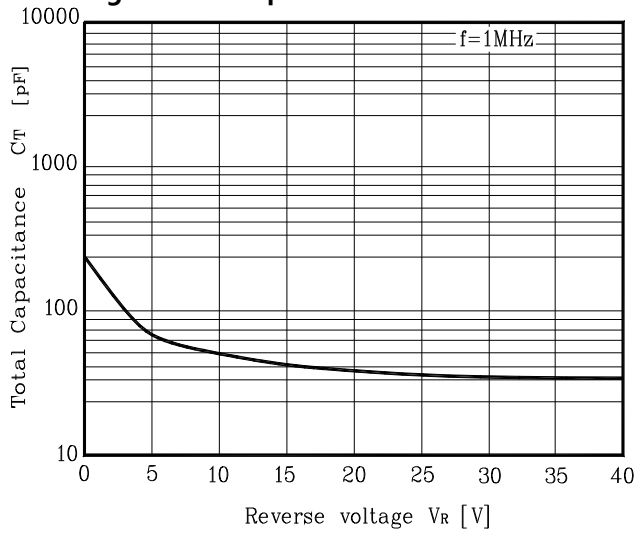
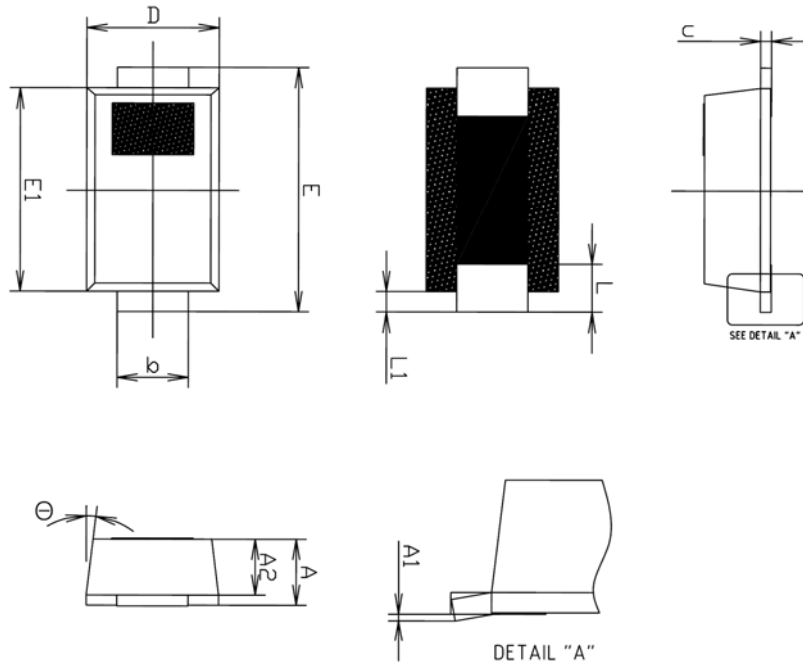


Fig. 3 Total Capacitance

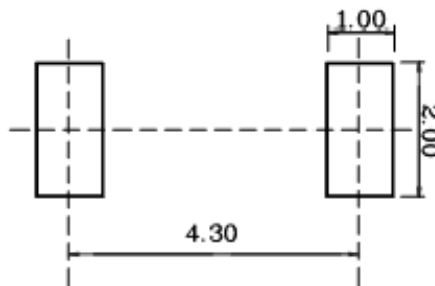


Package Outline Dimensions



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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