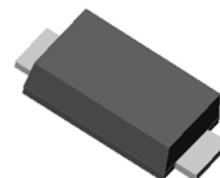


## Schottky Barrier Rectifier

### General Description

The SDB0540 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-123

### 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



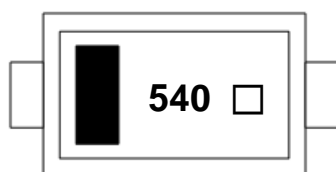
### Applications

- Portable equipment battery applications
- Switching mode power supplies applications

### Ordering Information

Part Number	Marking Code	Package	Packaging
SDB0540	540 □	SOD-123	Tape & Reel

### Marking Information




540 = Specific Device Code

□ = Year & Week Code Marking

■ = Color band denote cathode

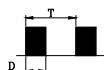
### Pinning Information

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	$V_{RRM}, V_R, V_{RWM}$	40	V
Repetitive peak forward current	$I_{FRM}^{1)}$	1	A
Forward current	$I_O$	0.5	A
Non-repetitive peak forward current (10ms)	$I_{FSM}$	5.5	A
Operating Junction temperature	$T_J$	-55~150	$^{\circ}\text{C}$
Storage temperature, Operating Case	$T_{stg}$	-55~150	$^{\circ}\text{C}$

\* 1)  $\delta = D/T = 0.33$   
( $T < 1\text{S}$ )

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage <sup>2)</sup>	$V_F (1)$	$I_F=0.5\text{A}$	-	-	0.51	V
	$V_F (2)$	$I_F=1.0\text{A}$	-	-	0.62	V
Reverse leakage current <sup>3)</sup>	$I_R$	$V_R=40\text{V}$	-	-	20	$\mu\text{A}$
Total capacitance	$C_T$	$V_R=40\text{V}, f=1\text{MHz}$	-	14	-	pF

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

<sup>3)</sup> Pulse test:  $t_p \leq 5\mu\text{s}$ , Duty cycle  $\leq 2\%$

Rating and Characteristic Curves

Fig. 1 Forward Voltage Characteristics

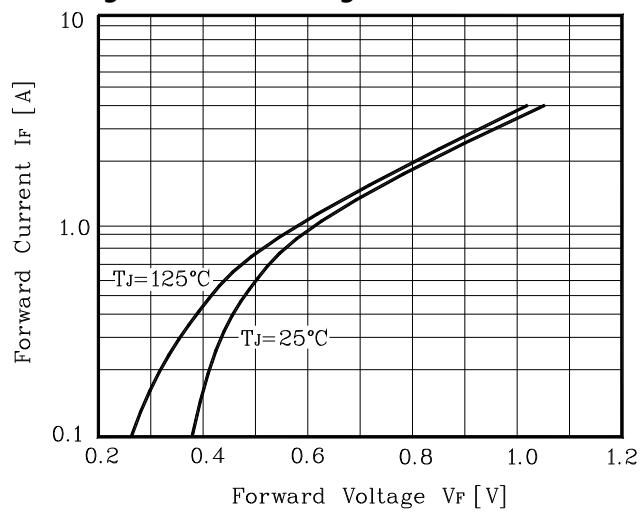


Fig. 2 Reverse Characteristics

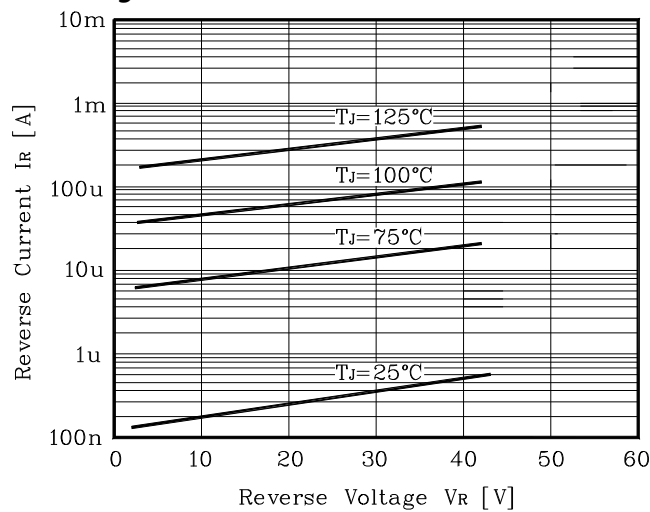
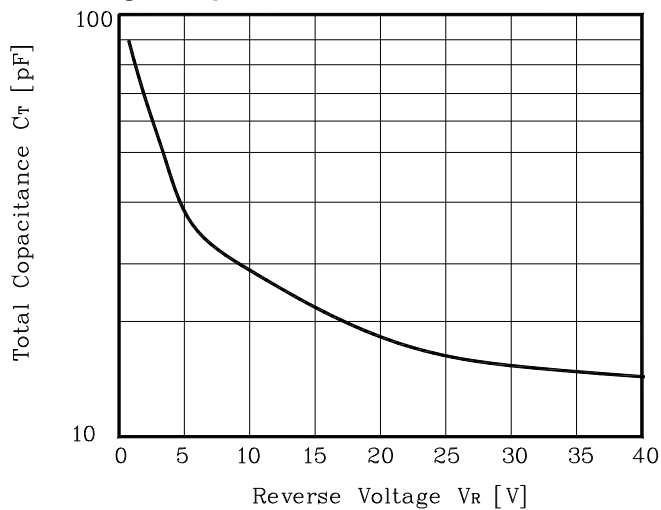
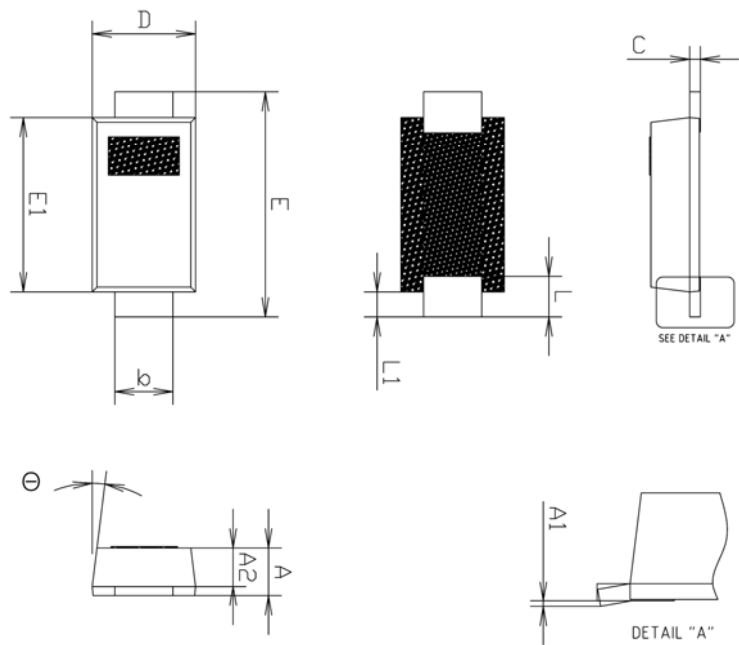


Fig. 3 Capacitance

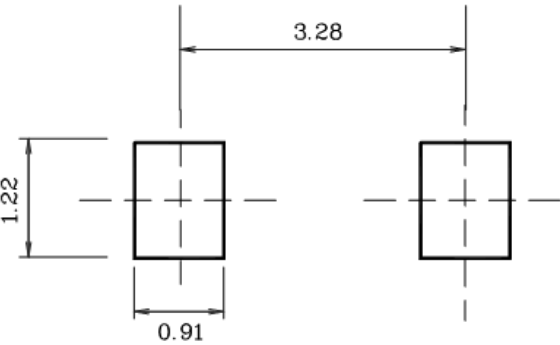


Package Outline Dimensions



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.70	0.750	0.80	
A1	0.00	—	0.10	
A2	0.55	0.60	0.65	
b	0.85	0.92	0.99	
c	0.12	0.17	0.22	
D	1.50	1.60	1.70	
E	3.30	3.50	3.70	
E1	2.60	2.70	2.80	
L	0.49	0.64	0.79	
L1	0.30	0.40	0.50	
Θ	4°	—	10°	

※ Recommend PCB solder land (Unit : mm)



**The AUK Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).**

**Please make sure that you consult with us before you use these AUK Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Corp. cannot accept liability to any damage which may occur in case these AUK Corp. products were used in the mentioned equipments without prior consultation with AUK Corp..**

**Specifications mentioned in this publication are subject to change without notice.**