

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



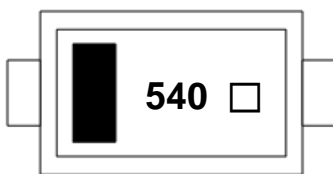
Applications

- 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

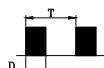
Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode		
2	Anode		

Absolute Maximum Ratings (T_{amb}=25°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	°C
Storage temperature, Operating Case	T _{stg}	-55~150	°C

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



Electrical Characteristics (T_{amb}=25°C, Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage ²⁾	V _{F(1)}	I _F =0.5A	-	-	0.51	V
	V _{F(2)}	I _F =1.0A	-	-	0.62	V
Reverse leakage current ³⁾	I _R	V _R =40V	-	-	20	μA
Total capacitance	C _T	V _R =40V, f=1MHz	-	14	-	pF

²⁾ Pulse test: t_p ≤ 380 μs, Duty cycle ≤ 2%

³⁾ Pulse test: t_p ≤ 5 μs, Duty cycle ≤ 2%

Rating and Characteristic Curves

Fig. 1 Forward Voltage Characteristics

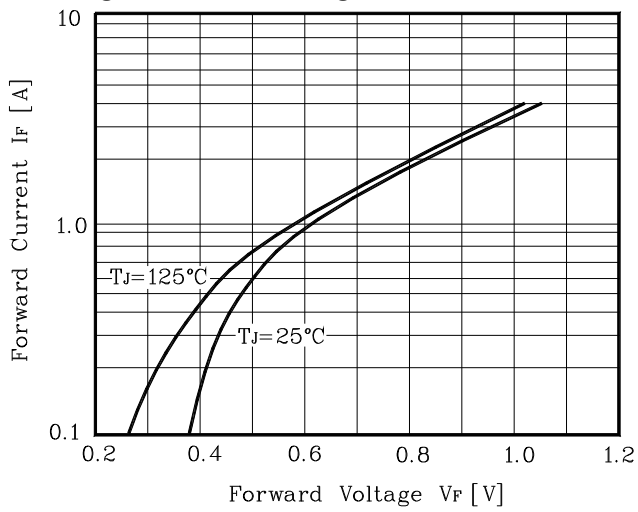


Fig. 2 Reverse Characteristics

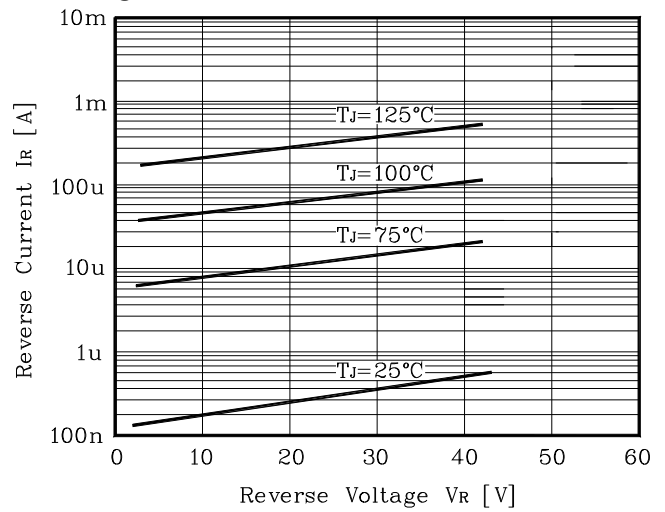
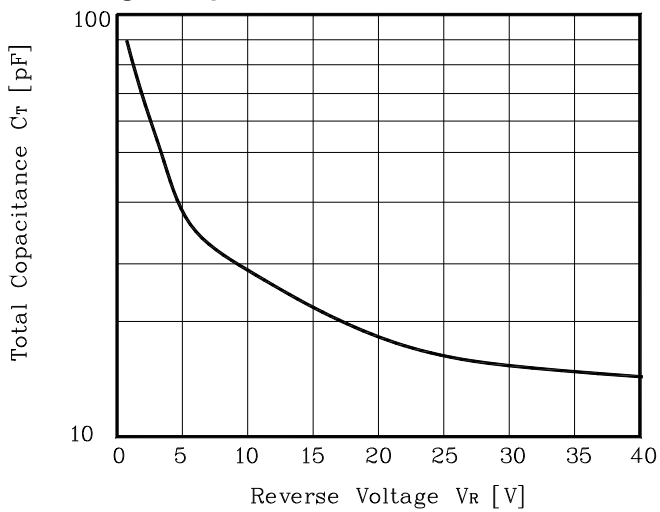
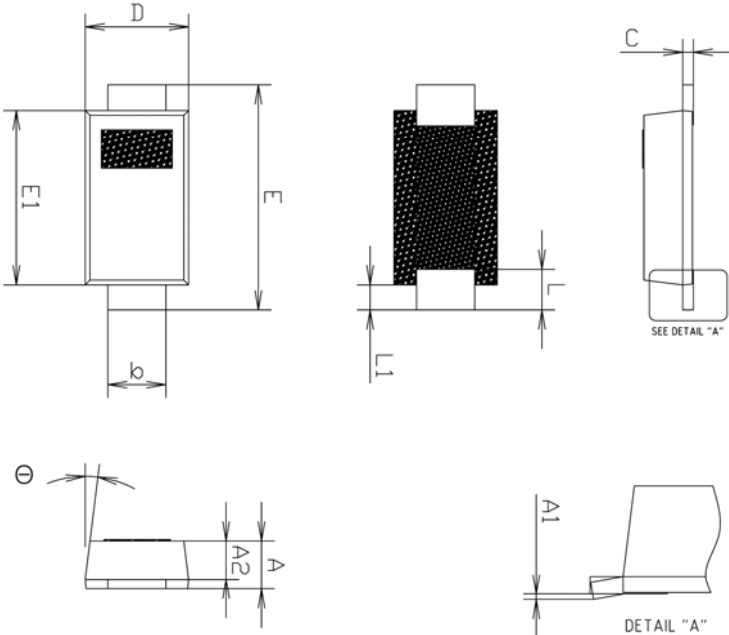


Fig. 3 Capacitance

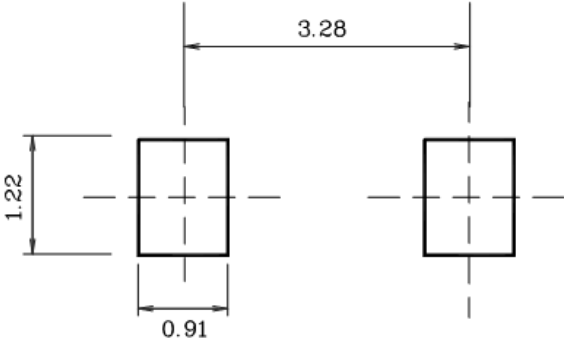


Package Outline Dimensions



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)



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