

## Schottky Barrier Rectifier

### General Description

The SDB1040 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



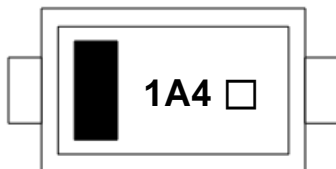
### Applications

- Portable equipment battery applications
- Switching mode power supplies applications

### Ordering Information


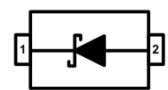
Part Number	Marking Code	Package	Packaging
SDB1040	1A4 □	SOD-123	Tape & Reel

### Marking Information



- 1A4 = 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
Peak reverse voltage	$V_{RM}$	40	V
DC reverse voltage	$V_R$	40	V
Average forward rectified current	$I_O$	1	A
Peak forward surge current 8.3ms single half sine-wave	$I_{FSM}$	8	A
Operating junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-55 ~ 150	

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage <sup>1)</sup>	$V_F$	$I_F=1\text{A}$	-	0.50	0.55	V
Reverse leakage current <sup>2)</sup>	$I_R$	$V_R=40\text{V}$	-	-	200	uA
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:  $t_p \leq 20\text{ms}$ , Duty cycle  $\leq 2\%$

## Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

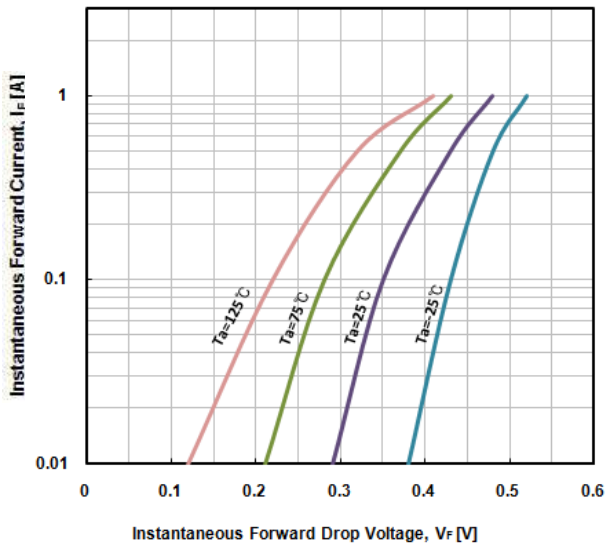


Fig. 2) Typical Reverse Characteristics

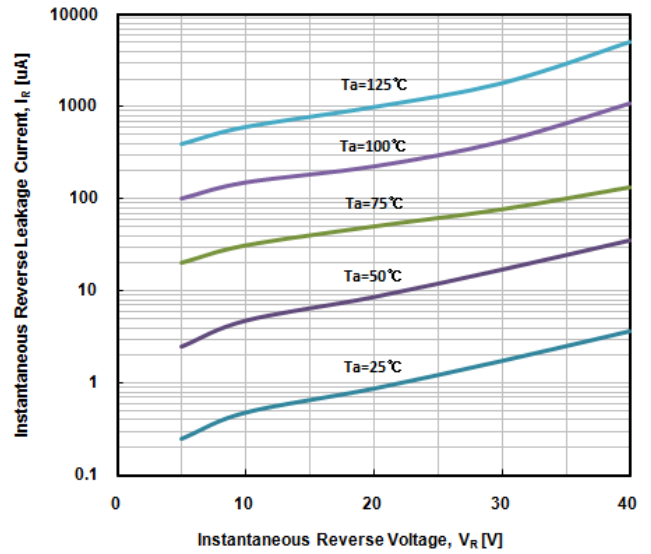


Fig. 3) Typical Total Capacitance Characteristics

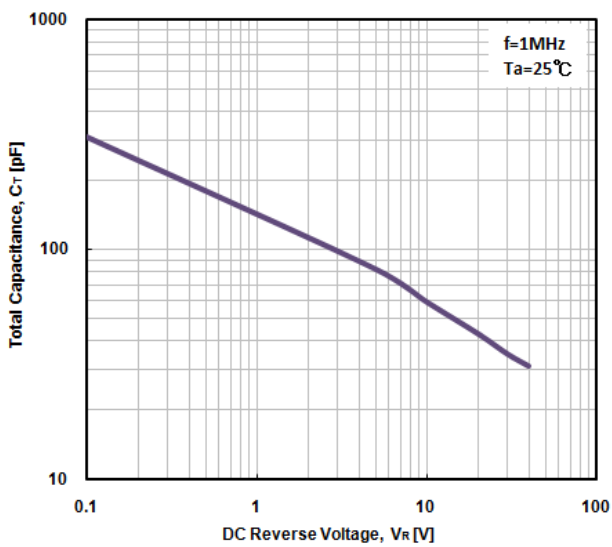
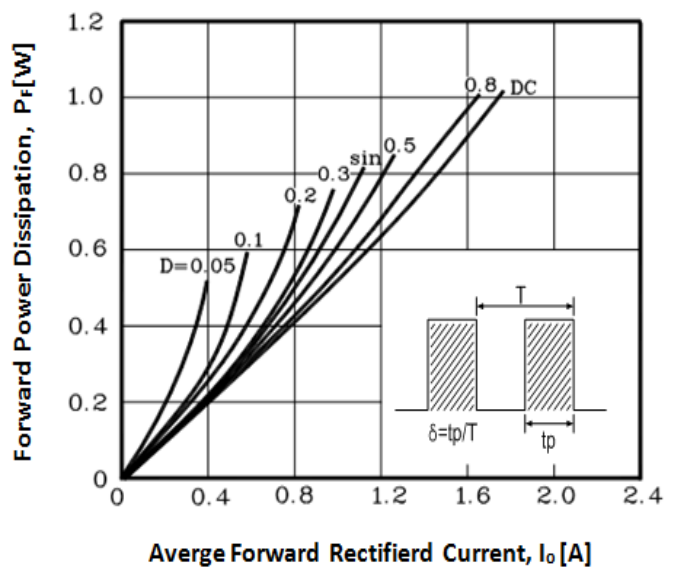
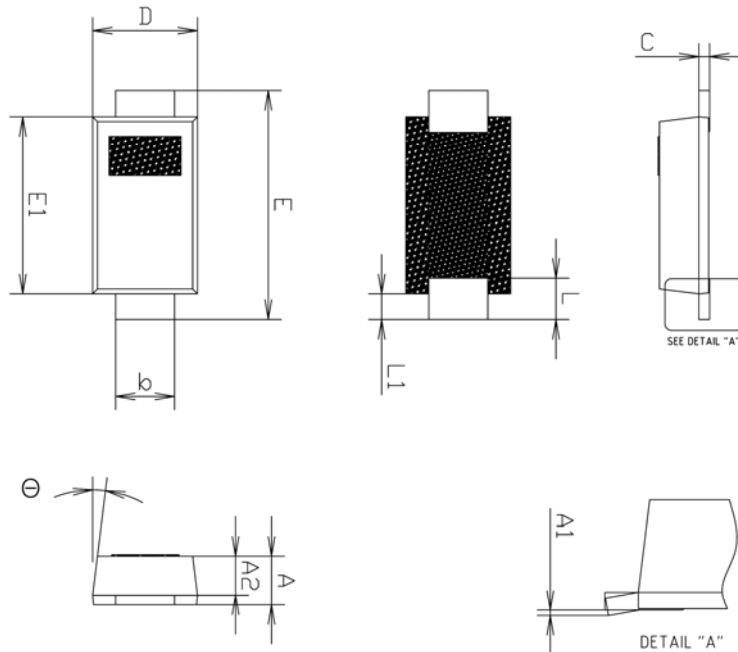


Fig. 4) Forward Power dissipation Characteristics

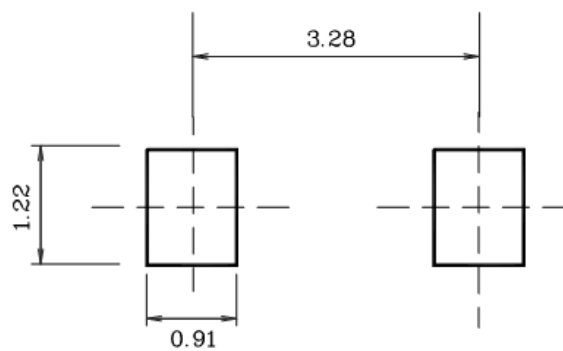


## Package Outline Dimensions (Unit: mm)



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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