

## Schottky Barrier Rectifier

### General Description

The SDB160G 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

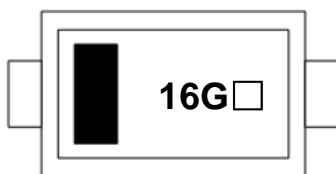
### Applications

- Free-wheeling applications
- Switching mode power supplies applications

### Ordering Information

Part Number	Marking Code	Package	Packaging
SDB160G	16G□	SOD-123	Tape & Reel

### Marking Information

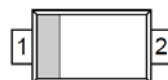
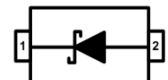


16G = Specific Device Code

□ = Year & Week Code Marking

■ = Color band denote cathode

### Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode		
2	Anode		

## Absolute Maximum Ratings (T<sub>amb</sub>=25°C, Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Maximum repetitive reverse voltage Maximum working peak reverse voltage Maximum DC blocking voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	60	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	12	A
Maximum operating junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55 ~ 150	

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum thermal resistance Junction to ambient	R <sub>th(j-a)</sub> <sup>3)</sup>	250	°C/W

## Electrical Characteristics (T<sub>amb</sub>=25°C, Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =1.5mA	60	-	-	V
Forward drop voltage	V <sub>F</sub> <sup>1)</sup>	I <sub>F</sub> =1A	-	-	0.55	V
Reverse leakage current	I <sub>R</sub> <sup>2)</sup>	V <sub>R</sub> =60V	-	-	50	μA
Total capacitance	C <sub>T</sub>	V <sub>R</sub> = 10V, f=1MHz	-	45	-	pF

<sup>1)</sup> Pulse test: t<sub>p</sub>≤380us, Duty cycle≤2%

<sup>2)</sup> Pulse test: t<sub>p</sub>≤5ms, Duty cycle≤2%

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

## Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristic

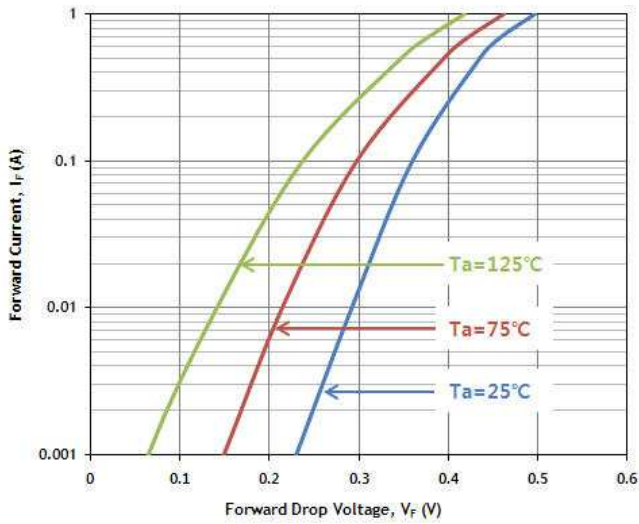


Fig. 2) Typical Reverse Characteristic

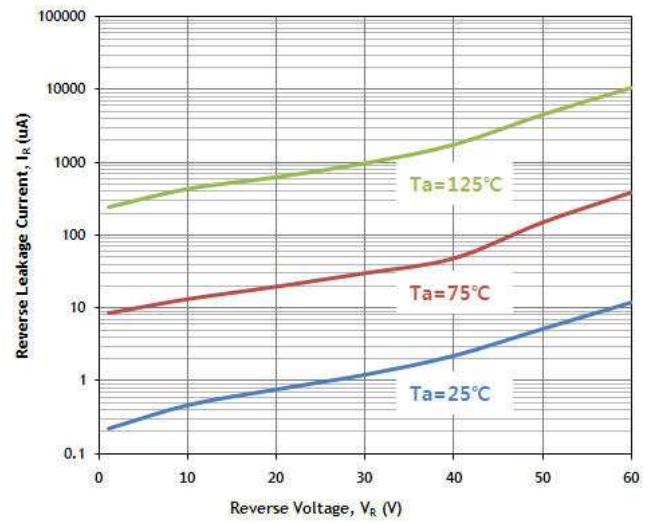


Fig. 3) Total Capacitance vs. Reverse Voltage

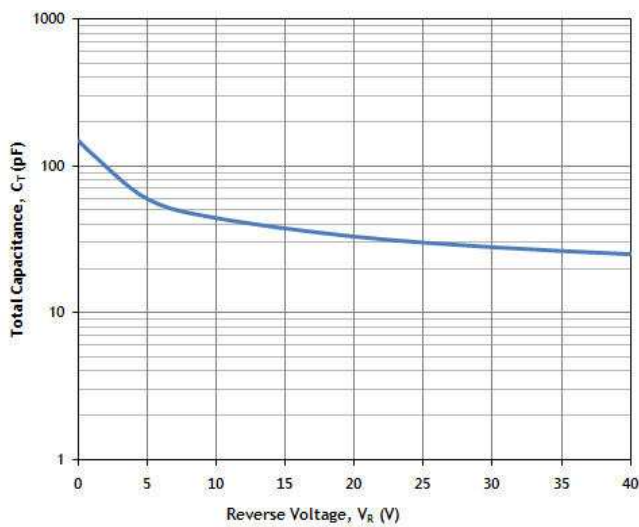
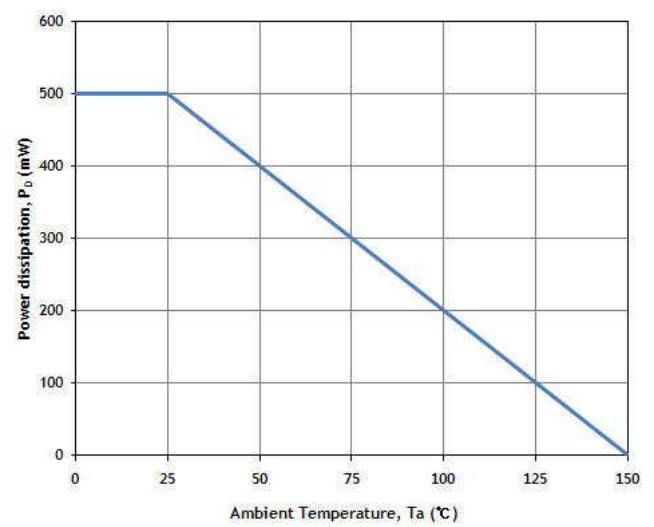
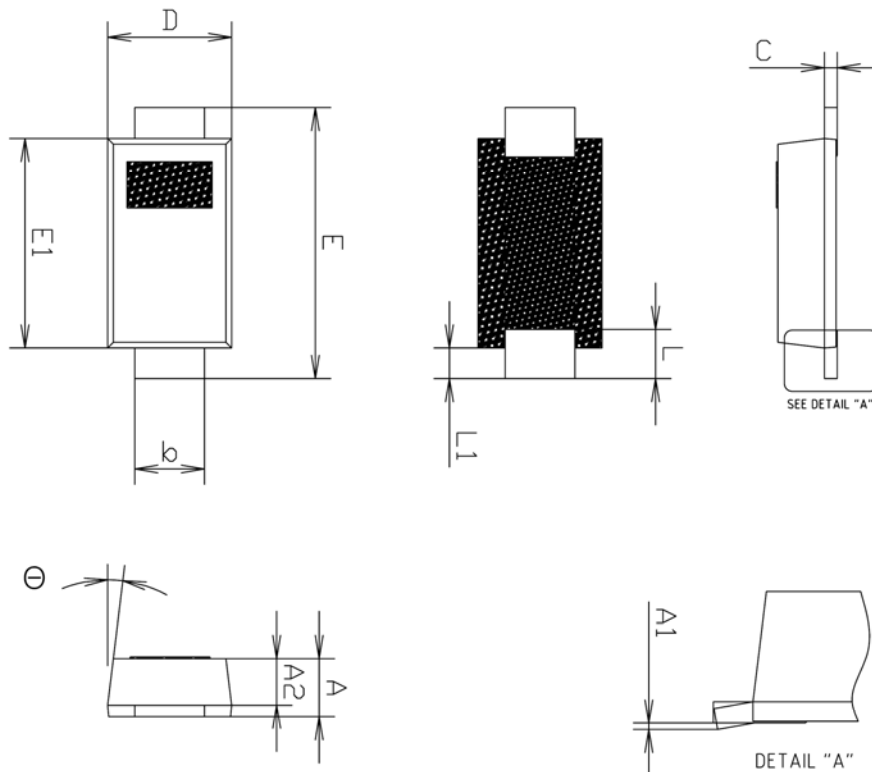


Fig. 4) Power Dissipation vs. Ambient Temperature

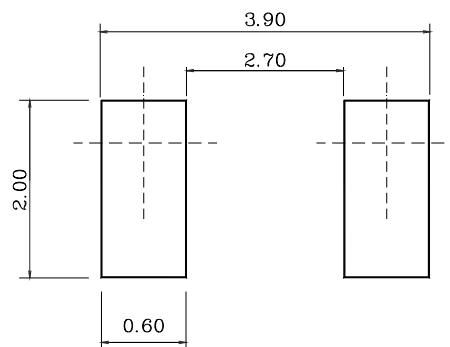


## Package Outline Dimensions (Unit : mm)



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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