

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- **Lead, Halogen and Antimony Free/RoHS Compliant (Note 1)**
- **"Green" Device (Notes 2 & 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

### Mechanical Data

- Case: SOD-323
- Case Material - Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Finish — Matte Tin Annealed Over Alloy 42 Leadframe. Solderable per MIL-STD-202, Method 208
- Weight: 0.004 grams (approximate)



Top View

### Ordering Information (Note 4)

Part Number	Case	Packaging
BAT760-7	SOD-323	3000/Tape & Reel

- Notes:
1. No purposefully added lead. Halogen and Antimony Free.
  2. Diodes Inc.'s "Green" policy can be found on our website at <http://www.diodes.com>.
  3. Product manufactured with Green Molding Compound and does not contain Halogens or Sb<sub>2</sub>O<sub>3</sub> Fire Retardants.
  4. For packaging details, go to our website at <http://www.diodes.com>.

### Marking Information



LZ = Product Type Marking Code

### Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	30	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Average Rectified Output Current	I <sub>O</sub>	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	5.5	A

### Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P <sub>D</sub>	235	mW
Typical Thermal Resistance Junction to Ambient (Note 5)	R <sub>θJA</sub>	426	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

### Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 6)	V <sub>(BR)R</sub>	30	—	—	V	I <sub>R</sub> = 500μA
Forward Voltage Drop	V <sub>F</sub>	—	245	270	mV	I <sub>F</sub> = 10mA
		—	320	350		I <sub>F</sub> = 100mA
		—	495	550		I <sub>F</sub> = 1A
Leakage Current (Note 6)	I <sub>R</sub>	—	3.0	10	μA	V <sub>R</sub> = 5V
		—	3.5	20		V <sub>R</sub> = 8V
		—	5.0	50		V <sub>R</sub> = 15V
Total Capacitance	C <sub>T</sub>	—	25	—	pF	f = 1MHz, V <sub>R</sub> = 5VDC

Notes: 5. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com>.  
6. Short duration pulse test used to minimize self-heating effect.

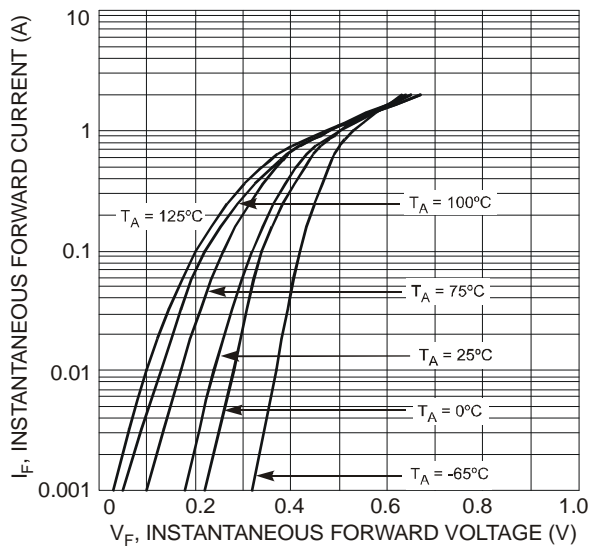


Fig. 1 Typical Forward Characteristics

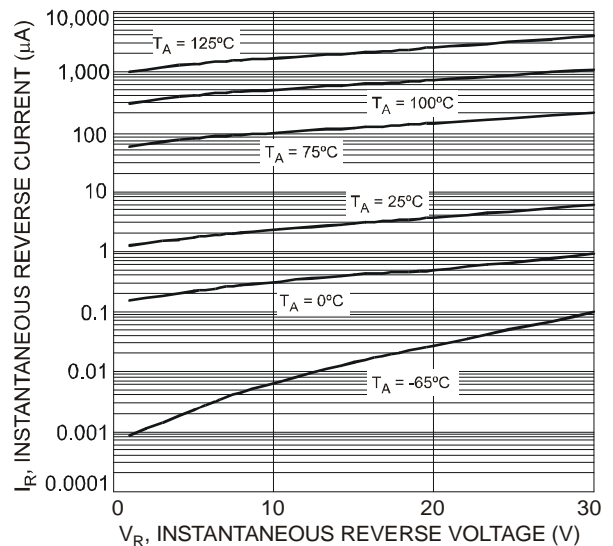


Fig. 2 Typical Reverse Characteristics

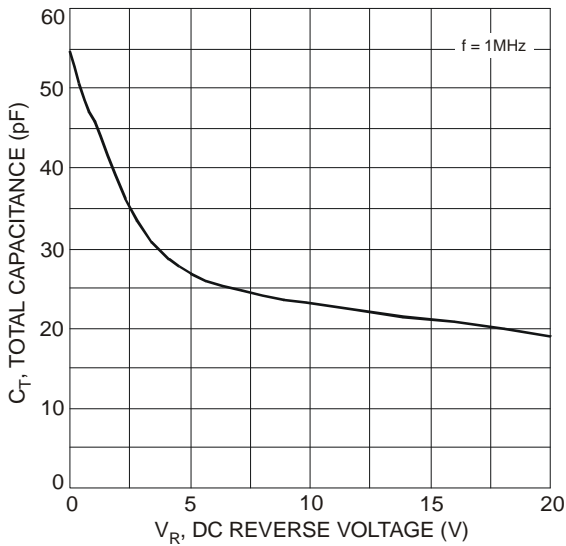


Fig. 3 Total Capacitance vs. Reverse Voltage

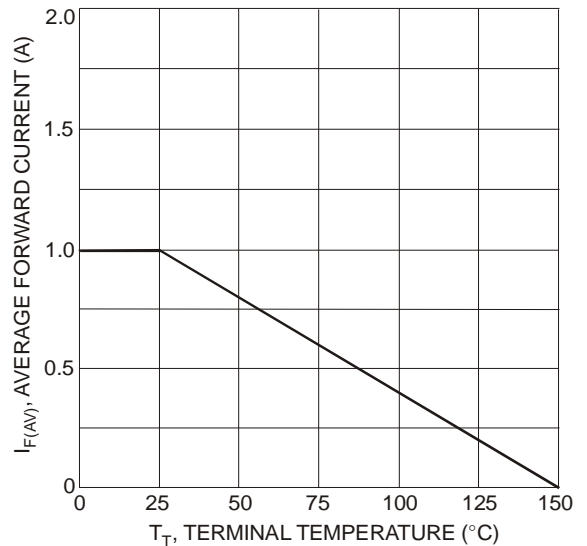
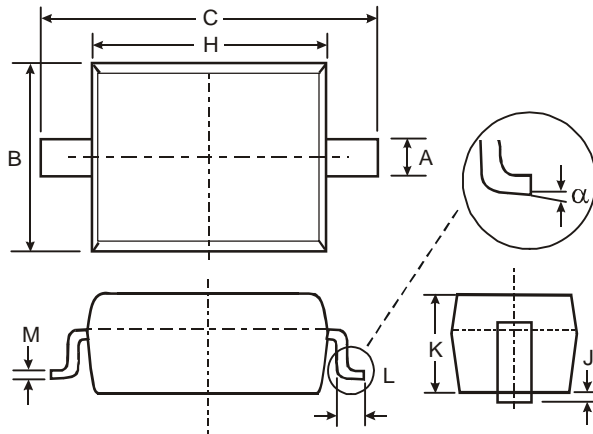


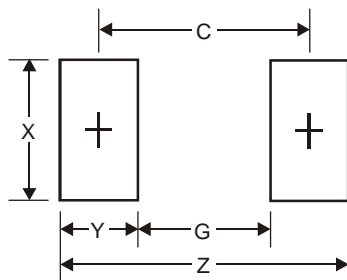
Fig. 4 Forward Current Derating Curve

**Package Outline Dimensions**



SOD-323		
Dim	Min	Max
A	0.25	0.35
B	1.20	1.40
C	2.30	2.70
H	1.60	1.80
J	0.00	0.10
K	1.0	1.1
L	0.20	0.40
M	0.10	0.15
$\alpha$	0°	8°
All Dimensions in mm		

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	3.75
G	1.05
X	0.65
Y	1.35
C	2.40

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