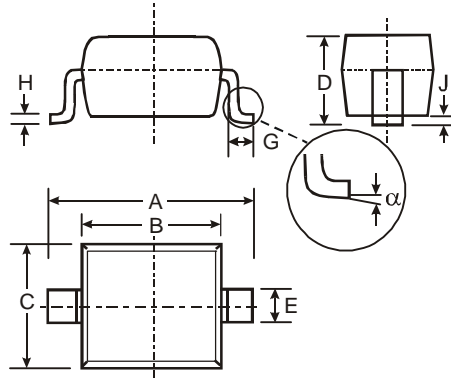


### Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- **Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 3 and 4)**
- **Qualified to AEC-Q101 Standards for High Reliability**

### Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: Cathode Band
- Marking Information: See Page 3
- Type Code: LG
- Ordering Information: See Page 3
- Weight: 0.006 grams (approximate)



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
$\alpha$	0°	8°
<b>All Dimensions in mm</b>		

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	45	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	40	V
Forward Continuous Current (Note 1)	$I_{FM}$	100	mA
Forward Surge Current @ $t < 8.3\text{ms}$	$I_{FSM}$	1.0	A
Power Dissipation (Note 1)	$P_D$	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-40 to +125	$^\circ\text{C}$

### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	45	—	—	—	$I_R = 100\mu\text{A}$
Forward Voltage	$V_F$	—	370	450	mV	$I_F = 10\text{mA}$
Reverse Leakage Current (Note 2)	$I_R$	—	0.07	1.0	$\mu\text{A}$	$V_R = 10\text{V}$
Total Capacitance	$C_T$	—	6.0	—	pF	$V_R = 10\text{V}, f = 1.0\text{MHz}$

- Notes:
1. Device mounted on FR-5 PCB 1.0 x 0.75 x 0.062 inch pad layout as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>
  2. Short duration pulse test used to minimize self-heating effect.
  3. No purposefully added lead. Halogen and Antimony Free.
  4. Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or  $\text{Sb}_2\text{O}_3$  Fire Retardants.

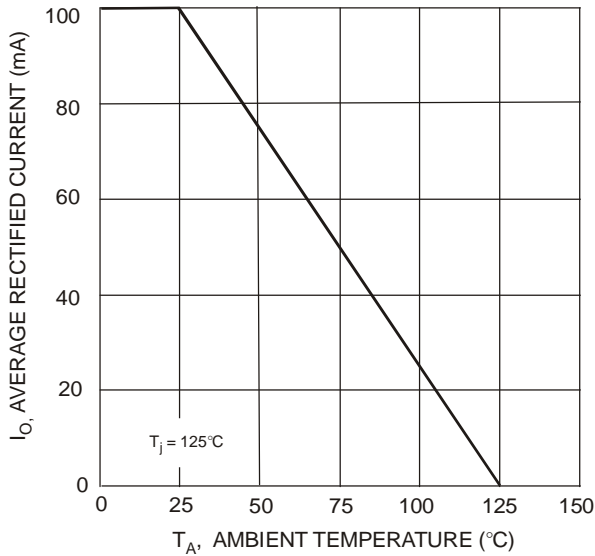


Fig. 1 Forward Current Derating Curve

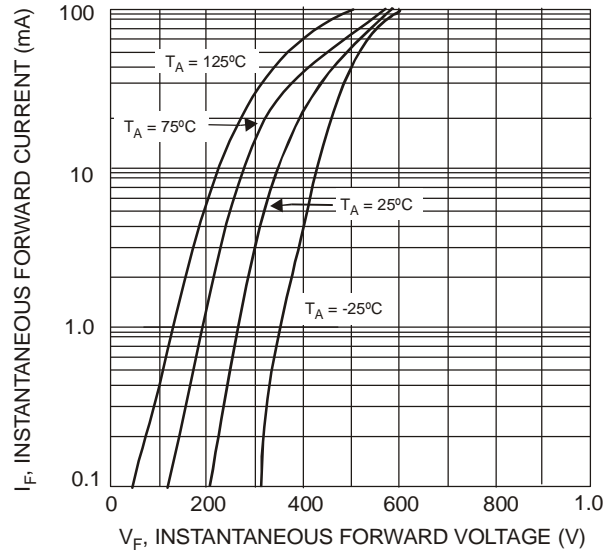


Fig. 2 Typical Forward Characteristics

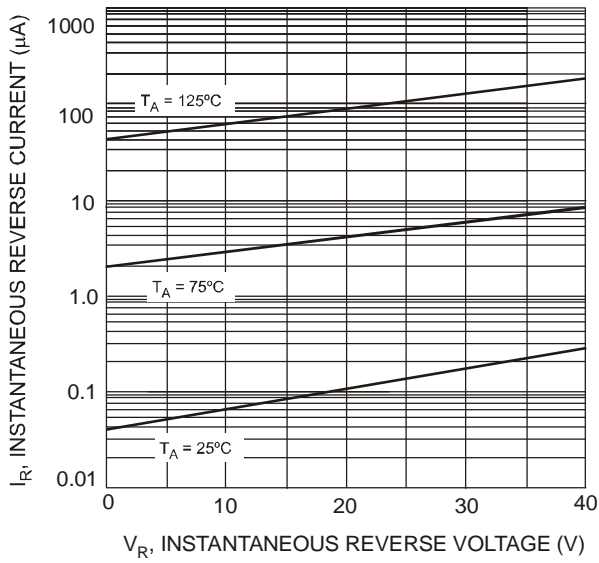


Fig. 3 Typical Reverse Characteristics

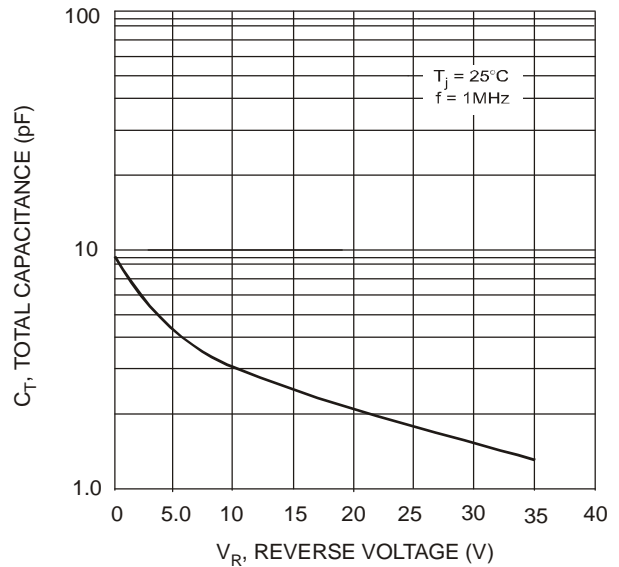


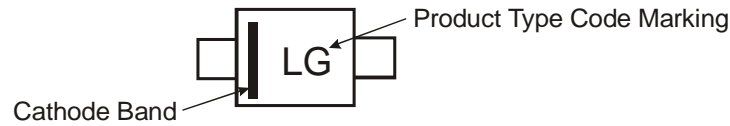
Fig. 4 Total Capacitance vs. Reverse Voltage

**Ordering Information** (Note 5)

Device	Packaging	Shipping
SDM10K45-7-F	SOD-323	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



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