



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## Features

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- **Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 2, 4 and 5)**

## 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-020D
- Terminal Connections: Cathode Band
- Terminals: Finish – Matte Tin Annealed Over Alloy 42 Leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.004 grams (approximate)



Top View

## 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>	9	A

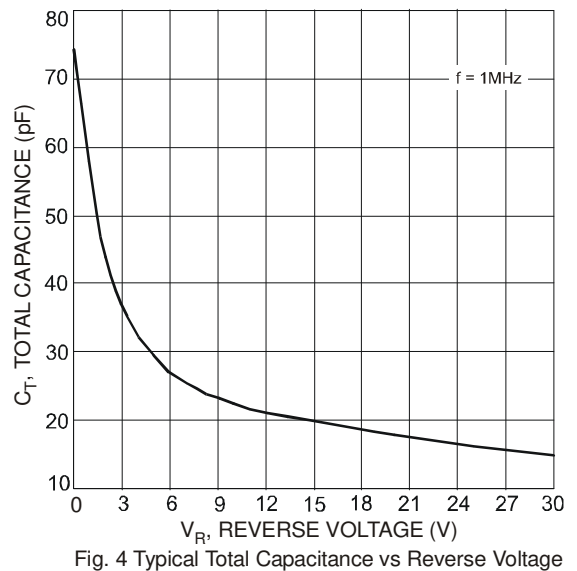
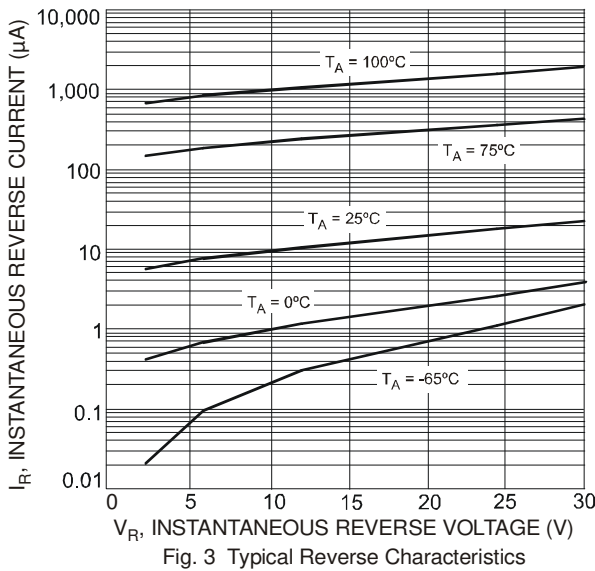
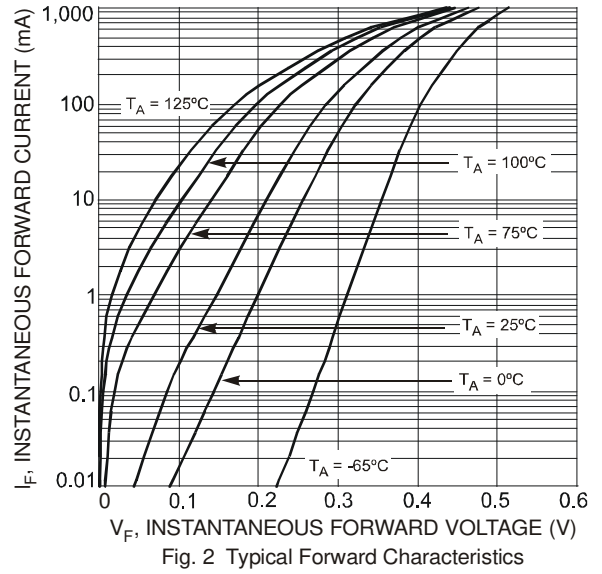
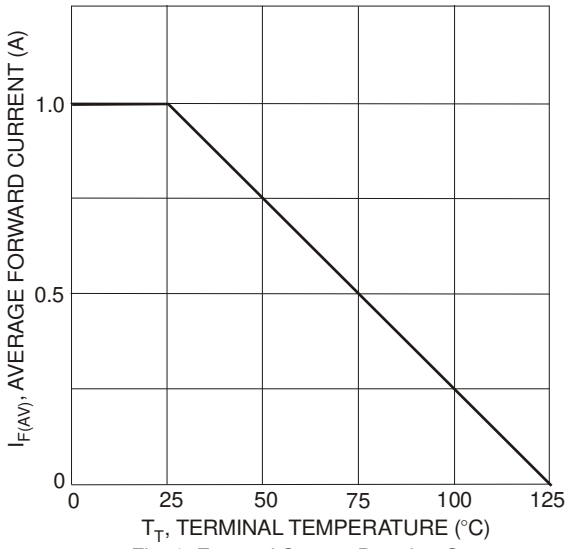
## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P <sub>D</sub>	200	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	R <sub>θJA</sub>	426	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 3)	V <sub>(BR)R</sub>	30	—	—	V	I <sub>R</sub> = 500μA
Forward Voltage Drop	V <sub>F</sub>	—	—	360 485	mV	I <sub>F</sub> = 100mA I <sub>F</sub> = 1A
Leakage Current (Note 3)	I <sub>R</sub>	—	—	100	μA	V <sub>R</sub> = 20V
Total Capacitance	C <sub>T</sub>	—	22	—	pF	f = 1MHz, V <sub>R</sub> = 10VDC

- Notes:
1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Diodes Inc's "Green" policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).
  3. Short duration pulse test used to minimize self-heating effect.
  4. No purposefully added lead. Halogen and Antimony Free.
  5. Product manufactured with Green Molding Compound and does not contain Halogens or Sb<sub>2</sub>O<sub>3</sub> Fire Retardants.

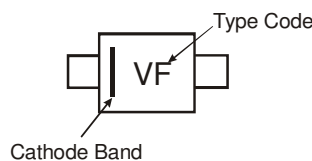


**Ordering Information** (Note 6)

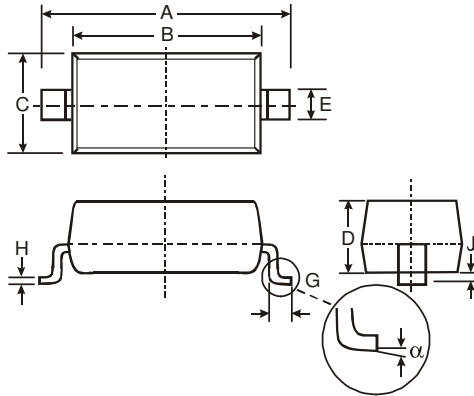
Part Number	Case	Packaging
SDM100K30L-7	SOD-323	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**

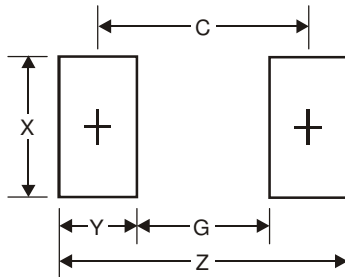


**Package Outline Dimensions**



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	0.00	0.10
α	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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