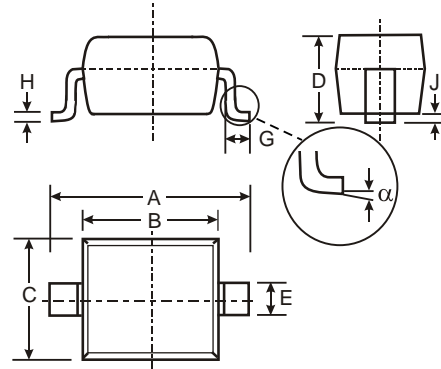


### Features

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- **Lead Free By Design/RoHS Compliant (Note 4)**
- **"Green Device" (Note 2)**

### 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-020C
- Terminal Connections: Cathode Band
- Terminals: Finish – Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking & Type Code Information: See Page 2  
Type Code: VF
- Ordering Information: See Page 2
- Weight: 0.004 grams (approx.)



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.00	1.10
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
	0°	8°
All Dimensions in mm		

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

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	30	V
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>JA</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

- Note:
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 test pulse used to minimize self-heating effect.
  4. No purposefully added lead.

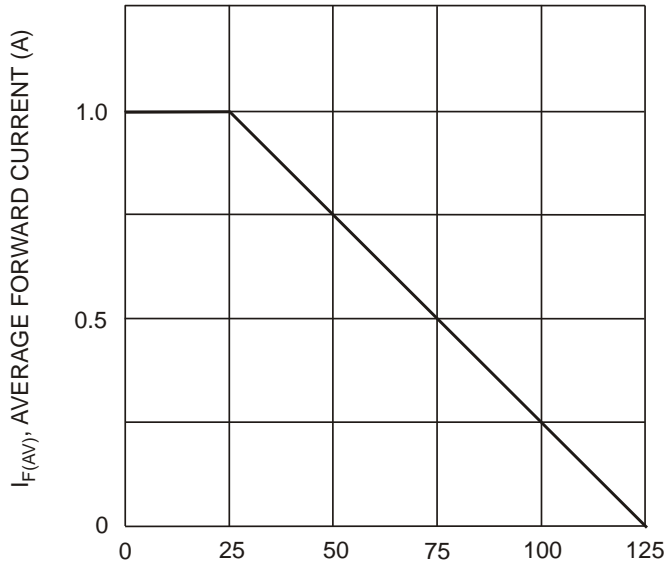


Fig. 1 Forward Current Derating Curve

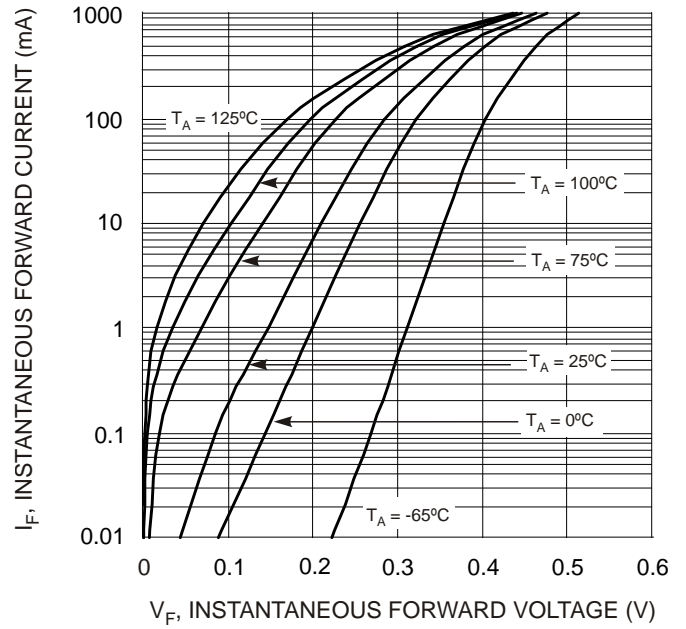


Fig. 2 Typical Forward Characteristics

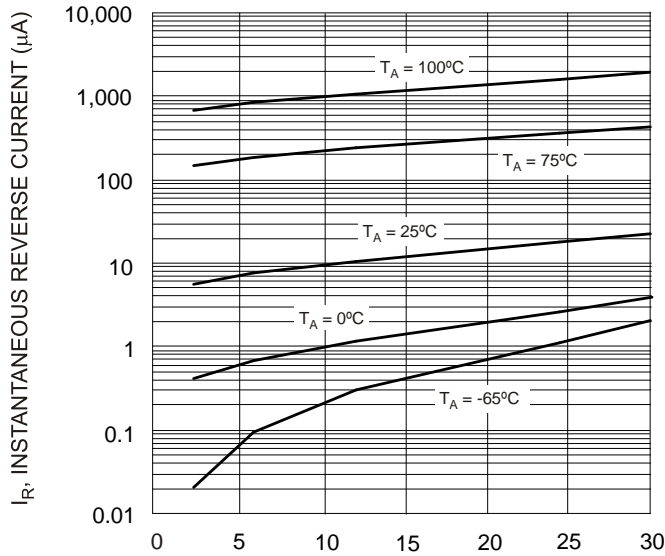


Fig. 3 Typical Reverse Characteristics

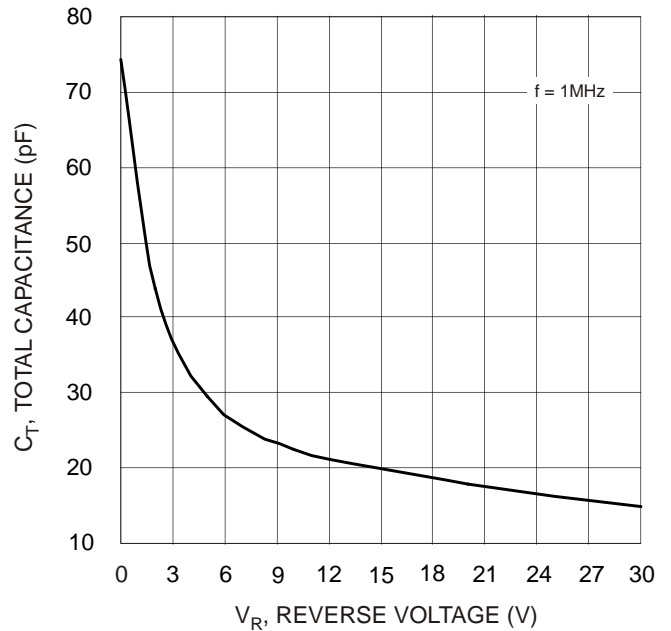


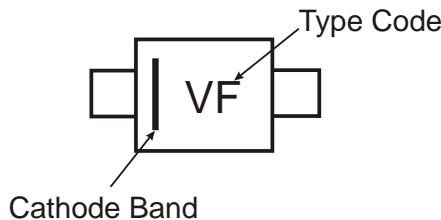
Fig. 4 Typ. Total Capacitance vs Reverse Voltage

**Ordering Information** (Note 5)

Device	Packaging	Shipping
SDM100K30L-7-F	SOD-323	3000/Tape and Reel

Note: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



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