

Features

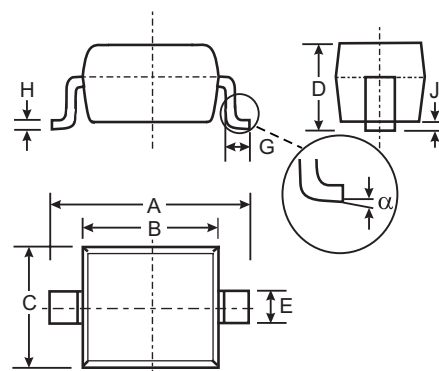
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- **Lead Free By Design/RoHS Compliant (Note 3)**
- **"Green" Device (Note 4)**

Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic. UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020C
- Polarity: Cathode Band
- Terminals: Finish - Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking: Type Code and Cathode Band

Type Code: SF

- 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	
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Output Current	I_O	0.5	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	3	A
Power Dissipation (Note 1)	P_d	235	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	426	$^\circ\text{C/W}$
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)	$V_{(BR)R}$	40	—	—	V	$I_R = 1\text{mA}$
Forward Voltage (Note 2)	V_F	—	285 480	300 550	mV	$I_F = 10\text{mA}$ $I_F = 500\text{mA}$
Reverse Current (Note 2)	I_R	—	1.0 2.0	3 5	μA μA	$V_R = 10\text{V}$ $V_R = 30\text{V}$
Total Capacitance	C_T	—	125 20	—	pF pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$ $V_R = 10\text{V}, f = 1.0\text{MHz}$

- 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. Short duration test pulse used to minimize self-heating effect.
 3. No Purposefully added Lead.
 4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

Ordering Information (Note 5)

Device	Packaging	Shipping
B0540WS-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>.

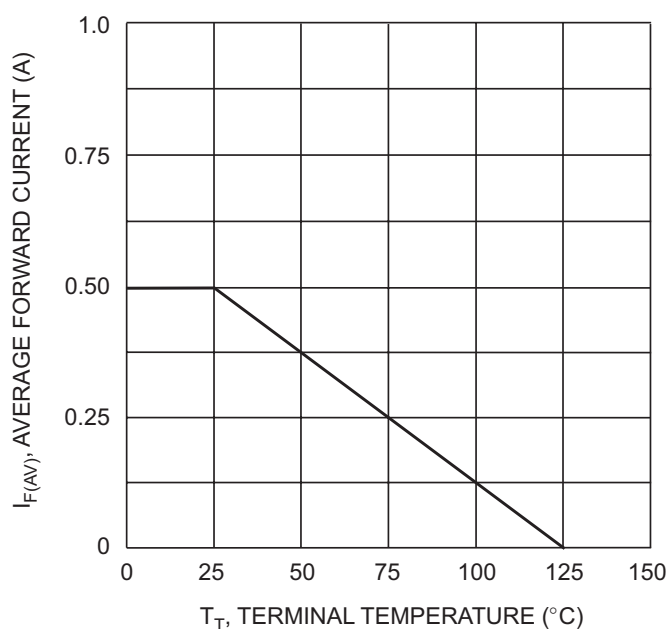
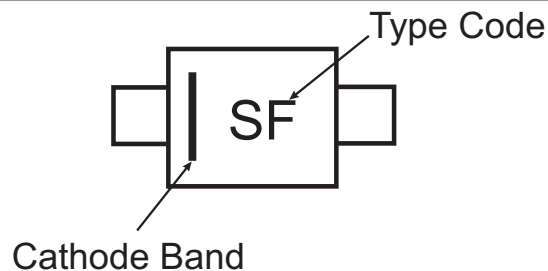
Marking Information


Fig. 1 Forward Current Derating Curve

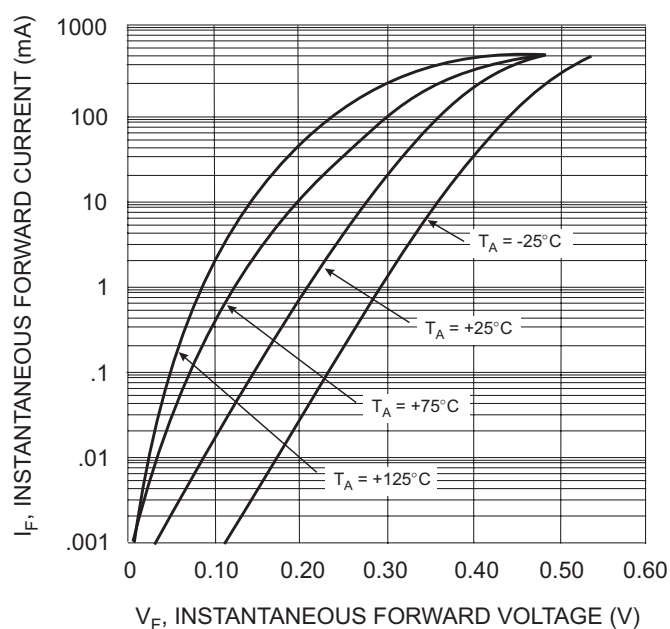


Fig. 2 Typical Forward Characteristics

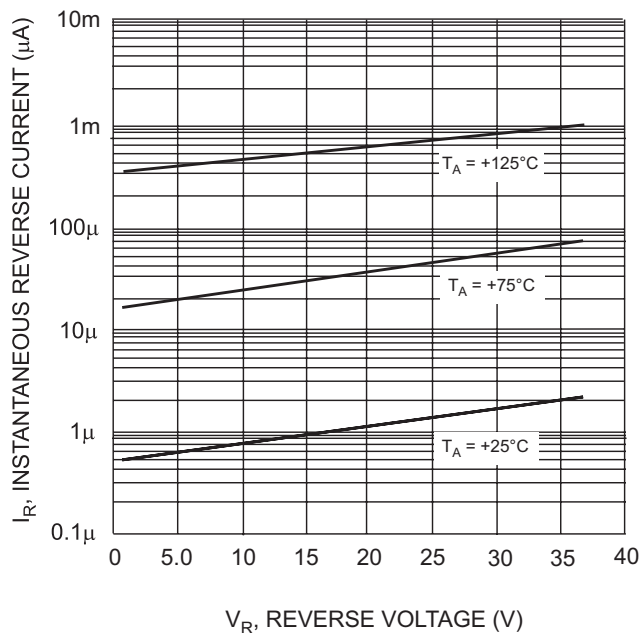


Fig. 3 Typical Reverse Characteristics

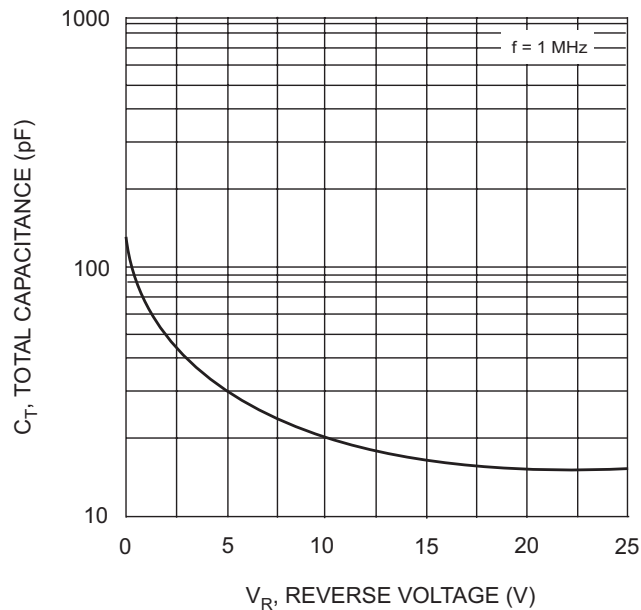


Fig. 4 Typical Total Capacitance vs. Reverse Voltage

IMPORTANT NOTICE

Diodes, Inc. and its subsidiaries reserve the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. Diodes, Inc. does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

The products located on our website at **www.diodes.com** are not recommended for use in life support systems where a failure or malfunction of the component may directly threaten life or cause injury without the express written approval of Diodes Incorporated.