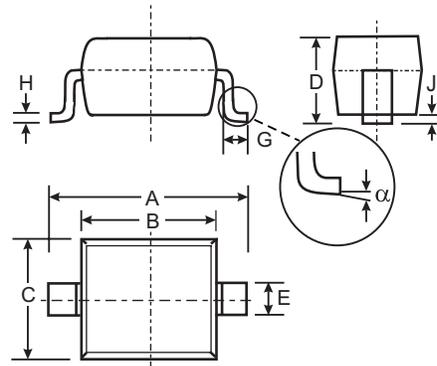


Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- **Lead Free/RoHS Compliant (Note 3)**
- **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-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: Cathode Band
- Marking: Type Code and Cathode Band
Type Code: SE
- Weight: 0.004 grams (approximate)



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	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current (See Figure 1)	I_O	0.5	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	2	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 Conditions
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	30	—	—	V	$I_R = 500\mu\text{A}$
Forward Voltage Drop	V_F	—	— 0.40	0.36 0.45	V	$I_F = 0.1\text{A}$ $I_F = 0.5\text{A}$
Leakage Current (Note 2)	I_R	—	—	80 100 500	μA	$V_R = 15\text{V}$ $V_R = 20\text{V}$ $V_R = 30\text{V}$
Total Capacitance	C_T	—	58	—	pF	$f = 1\text{MHz}, V_R = 0\text{VDC}$

- 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.

Ordering Information (Note 4)

Device	Packaging	Shipping
B0530WS-7-F	SOD-323	3000/Tape and Reel

- Note: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
 5. Part mounted on Polyimide PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>

Marking Information

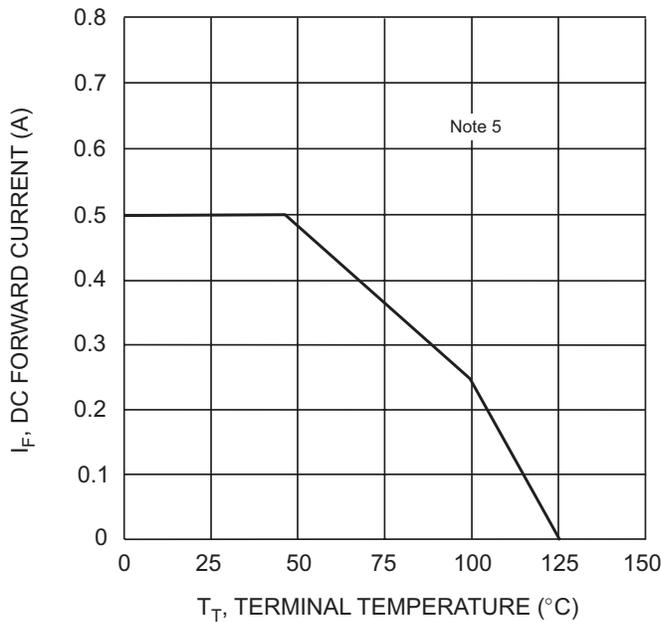
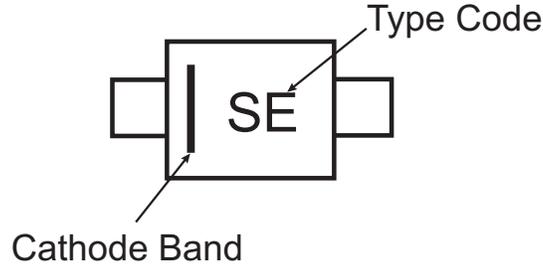


Fig. 1 Forward Current Derating Curve

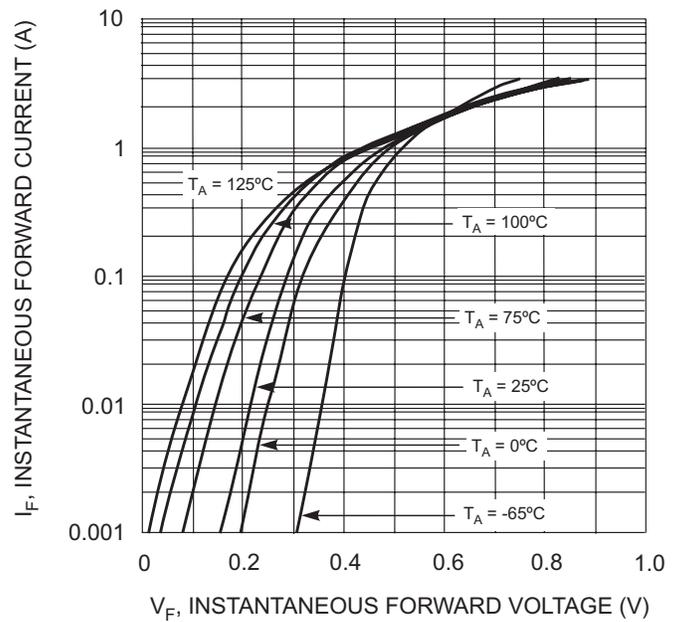


Fig. 2 Typical Forward Characteristics

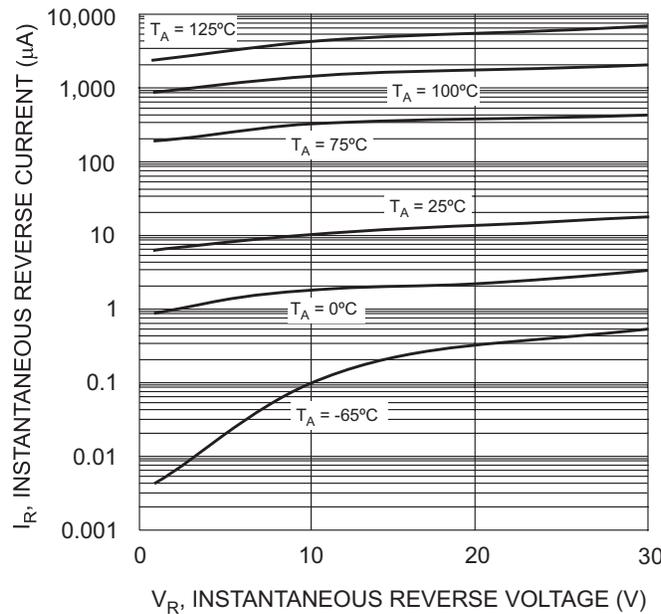


Fig. 3 Typical Reverse Characteristics

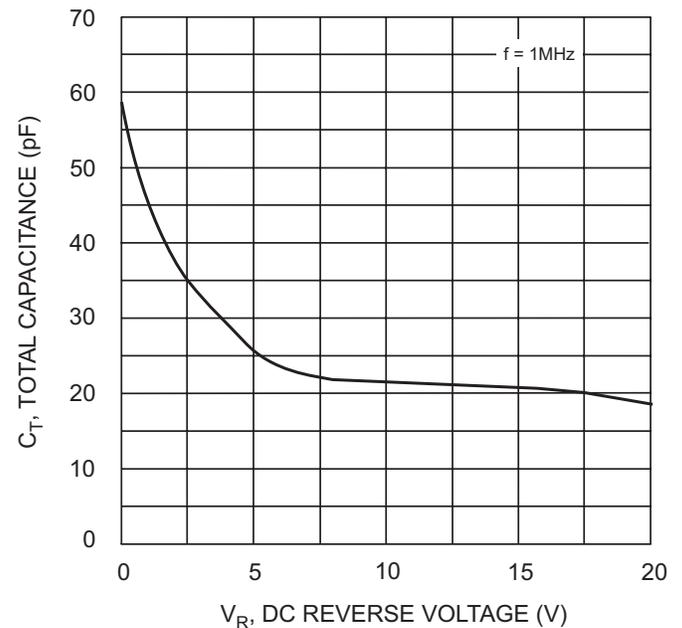


Fig. 4 Typ. Total Capacitance vs Reverse Voltage

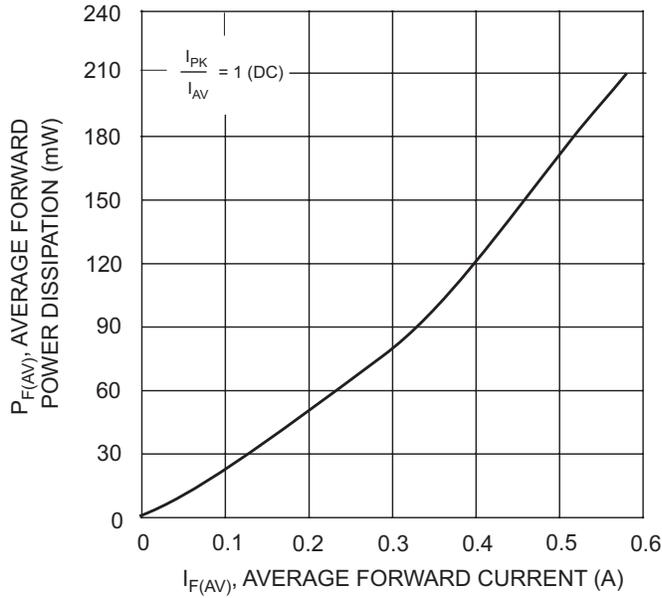


Fig. 5 Forward Power Dissipation

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