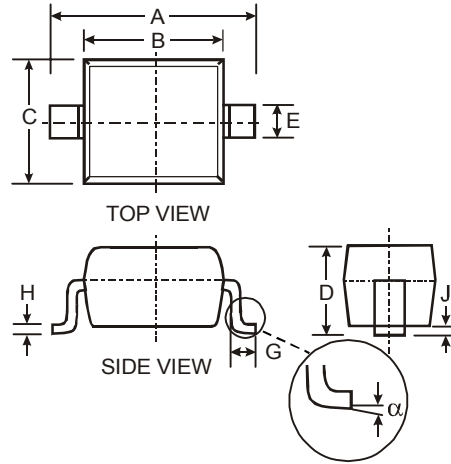


Features

- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free/RoHS Compliant Version (Note 3)

Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe). Please See Ordering Information, Note 6, on Page 3
- Polarity: Cathode Band
- Marking: See Page 3
- Type Code: L9
- 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	1.05 Typical	
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°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	21	V
Average Rectified Forward Current	I _O	100	mA
Forward Continuous Current (Note 1)	I _F	200	mA
Repetitive Peak Forward Current (Note 1)	I _{FRM}	300	mA
Forward Surge Current (Note 1) @ t < 1.0s	I _{FSM}	600	mA
Power Dissipation (Note 1)	P _d	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R _{θJA}	625	°C/W
Operating and Storage Temperature Range (Note 4)	T _j , T _{STG}	-65 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	30	—	—	V	I _R = 100μA
Forward Voltage	V _{FM}	—	—	240	mV	I _F = 0.1mA
				320		I _F = 1mA
				400		I _F = 10mA
				500		I _F = 30mA
				1000		I _F = 100mA
Reverse Leakage Current (Note 2)	I _{RM}	—	—	2.0	μA	V _R = 25V
Total Capacitance	C _T	—	—	10	pF	V _R = 1.0V, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	—	5.0	ns	I _F = 10mA through I _R = 10mA to I _R = 1.0mA, R _L = 100Ω

- 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. Short duration pulse test used to minimize self-heating effect.
 3. No purposefully added lead.
 4. $\frac{dP_{tot}}{dT_j} > \frac{1}{R_{th(j-a)}}$ thermal runaway condition for a diode on its own heatsink.

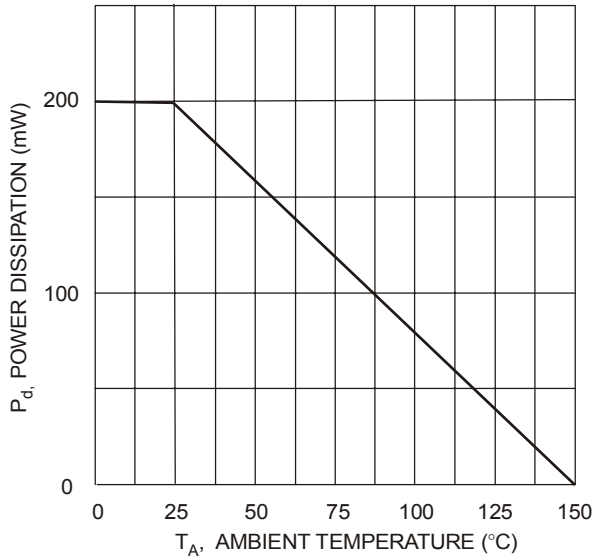


Fig. 1 Power Derating Curve

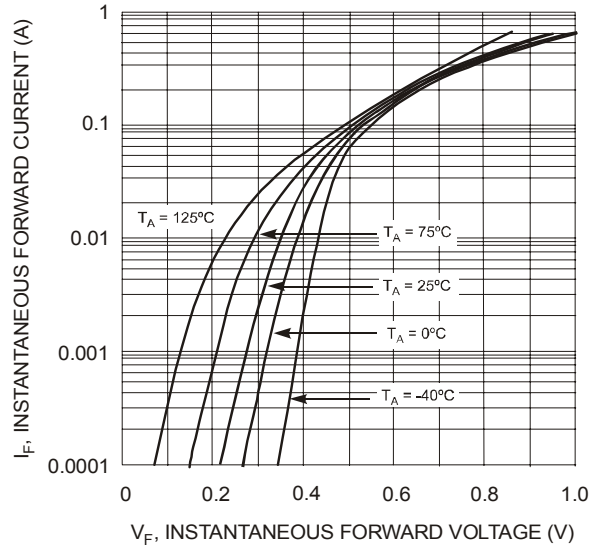


Fig. 2 Forward Characteristics

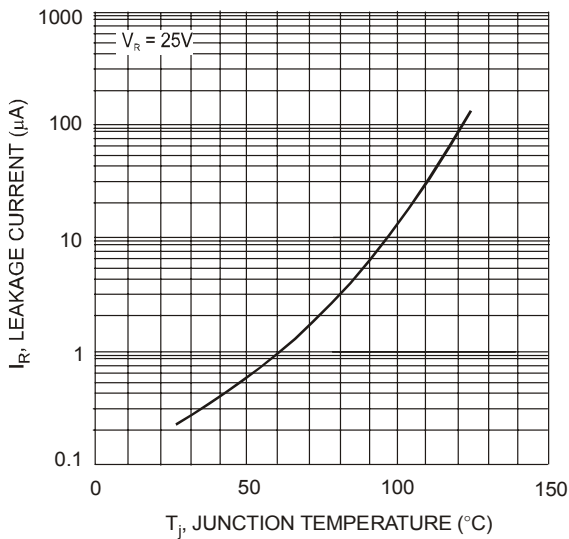


Fig. 3 Typical Reverse Characteristics

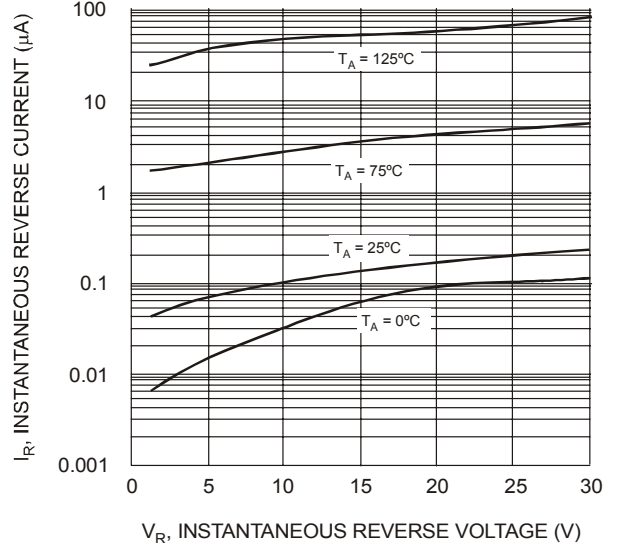


Fig. 4 Typical Reverse Characteristics

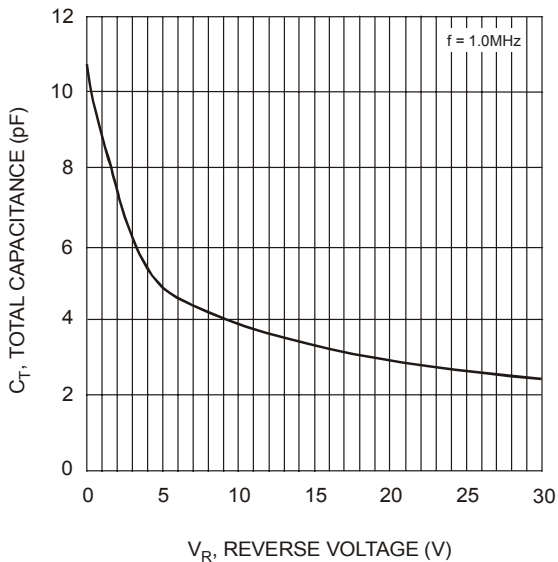


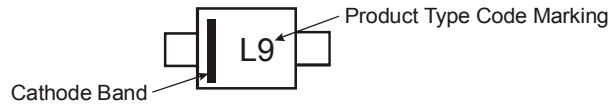
Fig. 5 Typical Capacitance vs. Reverse Voltage

Ordering Information (Note 5)

Device	Packaging	Shipping
BAT54WS-7	SOD-323	3000/Tape & Reel
BAT54WS-7-F (Note 6)	SOD-323	3000/Tape & Reel

Notes: 5. For Packaging Details, go to our website at: <http://www.diodes.com/datasheets/ap02007.pdf>.
6. For Lead Free/RoHS Compliant version part number, please add "-F" suffix to the part number above. Example: BAT54WS-7-F.

Marking Information



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