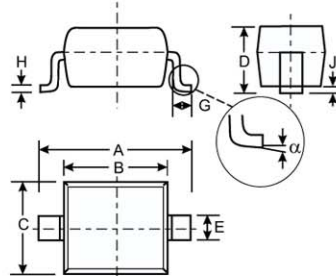


● Features

Low Forward Voltage Drop
Fast Switching
Ultra-Small Surface Mount Package
PN Junction Guard Ring for Transient and ESD Protection

● Mechanical Data

Case: SOD-323, Plastic
Case material - UL Flammability Rating Classification 94V-0
Moisture sensitivity: Level 1 per J-STD-020A
Leads: Solderable per MIL-STD-202, Method 208
Marking: L9
Polarity: Cathode Band
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	1.05 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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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 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) @ $t < 1.0\text{s}$	I_{FSM}	600	mA
Power Dissipation (Note 1)	P_d	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +125	$^\circ\text{C}$

● Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

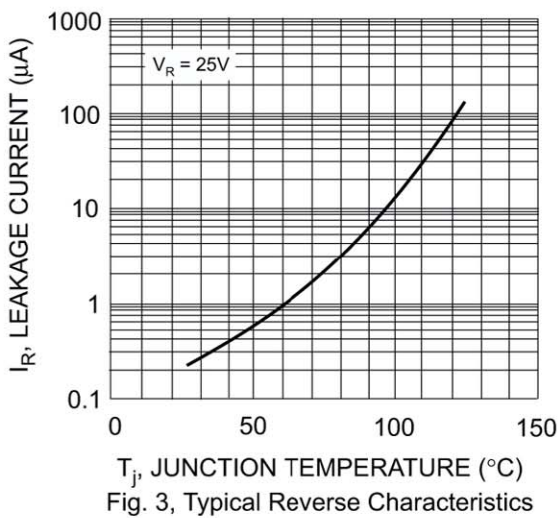
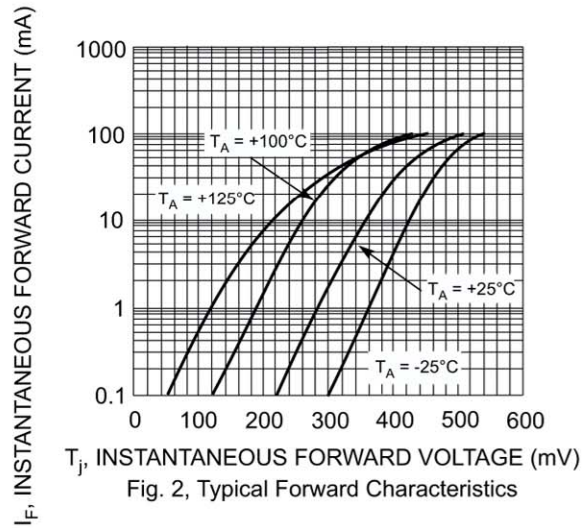
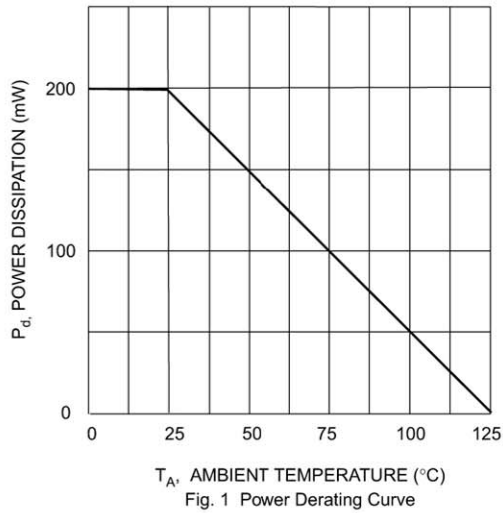
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	30	—	—	V	$I_{RS} = 100\mu\text{A}$
Forward Voltage (Note 2)	V_{FM}	—	—	240 320 400 500 1000	mV	$I_F = 0.1\text{mA}$ $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$
Reverse Leakage Current (Note 2)	I_{RM}	—	—	2.0	μA	$V_R = 25\text{V}$
Total Capacitance	C_T	—	—	10	pF	$V_R = 1.0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	—	5.0	ns	$I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}, R_L = 100\Omega$

- Notes: 1. Part mounted on FR-4 PC board with recommended pad layout.
2. Short duration test pulse used to minimize self-heating effect.



Ordering Information (Note 3)

Device	Packaging	Shipping
BAT54WS	SOD-323	3000/Tape & Reel



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