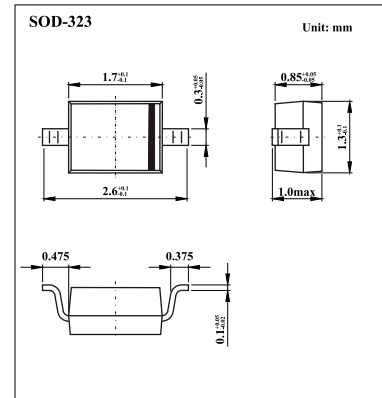


## Surface Mount Schottky Barrier Diode

## BAT54WS



### Features

- Low Forward Voltage Drop
- Fast Switching

### Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	30	V
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) @ $t < 1.0\text{s}$	$I_{FSM}$	600	mA
Power Dissipation (Note 1)	$P_d$	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to 125	$^\circ\text{C}$

Note 1. Part mounted on FR-4 PC board with recommended pad layout.

### Electrical Characteristics $T_a = 25^\circ\text{C}$

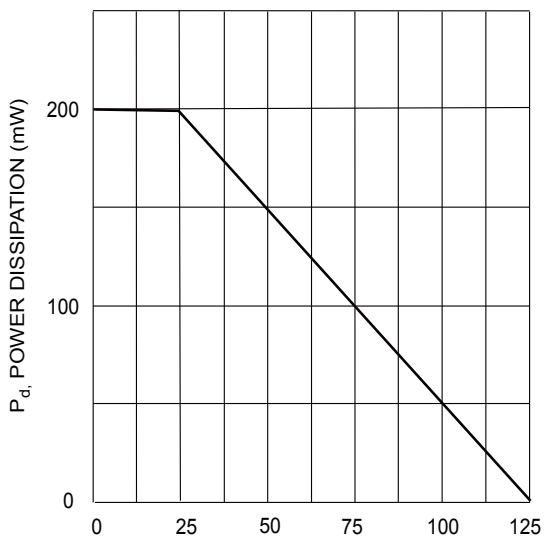
Parameter	Symbol	Test conditons	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100 \mu\text{A}$	30			V
Forward Voltage	$V_F$	$I_F = 0.1\text{mA}$ $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$			240 320 400 500 1000	mV
Reverse Leakage	$I_R$	$V_R = 25\text{V}$			2.0	$\mu\text{A}$
Total Capacitance	$C_T$	$V_R = 0\text{V}, f = 1.0\text{MHz}$			10	pF
Reverse Recover Time	$T_{rr}$	$I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}, R_L = 100 \Omega$			5.0	ns

### Marking

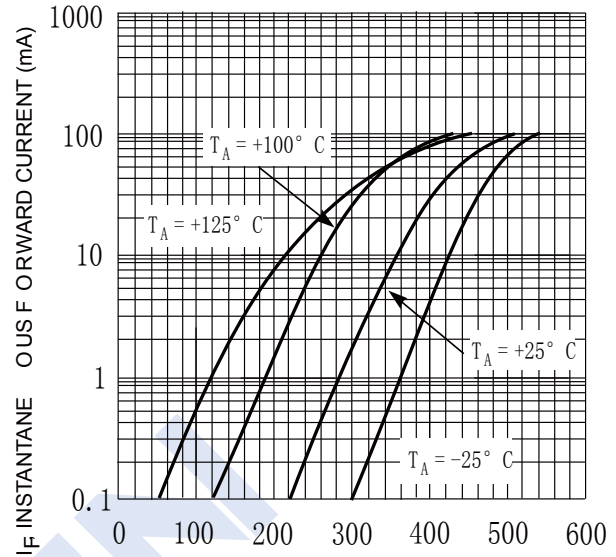
Marking	L9
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# BAT54WS

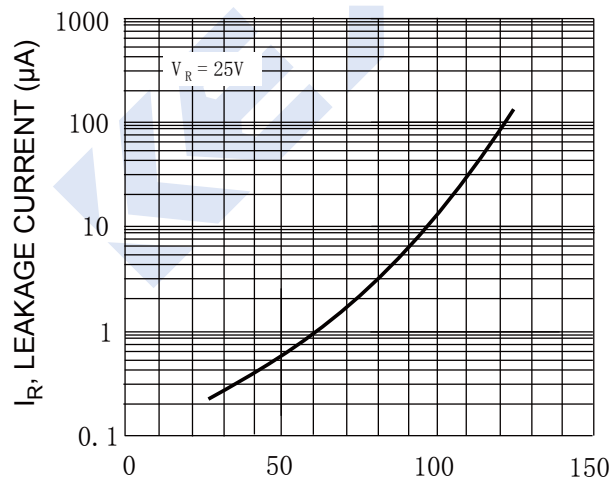
■ Typical Characteristics



T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig. 1 Power Derating Curve



T<sub>j</sub>, INSTANTANEOUS FORWARD VOLTAGE (mV)  
Fig. 2, Typical Forward Characteristics



T<sub>j</sub>, JUNCTION TEMPERATURE (°C)  
Fig. 3, Typical Reverse Characteristics