

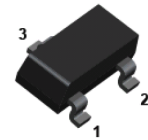
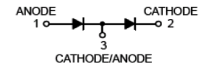
# Schottky Barrier Diode

multicomp **PRO**



## Features:

- Extremely Fast Switching Speed
- Low Forward Voltage
- Power Dissipation  $P_D = 200\text{mW}$
- Pb-Free Package is Available



SOT-23

## Applications:

Fast switching speed diode

## Max. Rating @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Limits	Unit
Peak repetitive peak reverse voltage Working peak DC reverse voltage	$V_{RRM}$ $V_{RMS}$ $V_R$	30	V
Forward continuous current	$I_F$	200	mA
Repetitive peak forward current	$I_{FRM}$	200	mA
Forward surge current @ $t < 1.0\text{s}$	$I_{FSM}$	600	mA
Power dissipation	$P_D$	200	mW
Thermal resistance, junction to ambient air	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating and Storage temperature	$T_j, T_{STG}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Min.	Max.	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 100\mu\text{A}$	30	-	V
Forward voltage	$V_{F1}$	$I_F = 0.1\text{mA}$	-	0.24	V
	$V_{F2}$	$I_F = 1\text{mA}$	-	0.32	V
	$V_{F3}$	$I_F = 10\text{mA}$	-	0.4	V
	$V_{F4}$	$I_F = 30\text{mA}$	-	0.5	V
	$V_{F5}$	$I_F = 100\text{mA}$	-	1	V
Reverse current	$I_R$	$V_R = 25\text{V}$	-	2	$\mu\text{A}$
Diode capacitance	$C_D$	$V_R = 1\text{V}, f = 1\text{MHz}$	-	10	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 10\text{mA}$ $I_{RR} = 0.1 \times I_R, R_L = 100\Omega$	-	5	ns

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

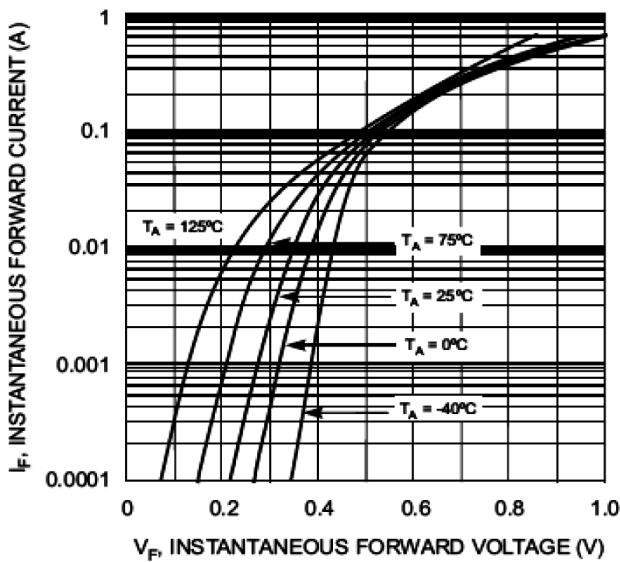


Fig. 1 Forward Characteristics

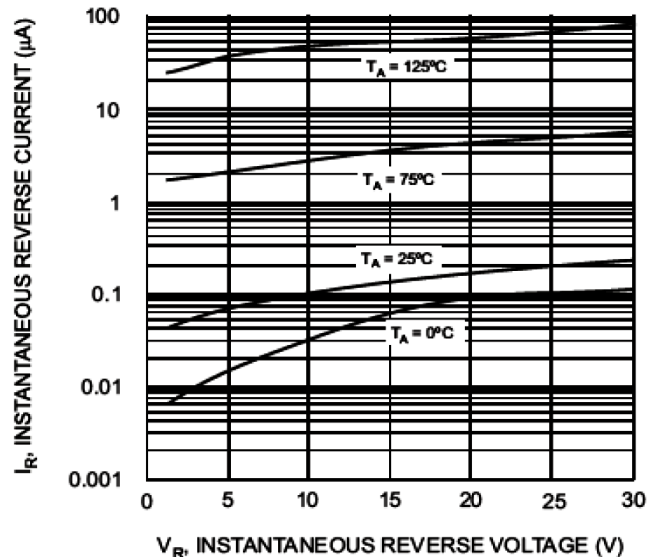


Fig. 2 Typical Reverse Characteristics

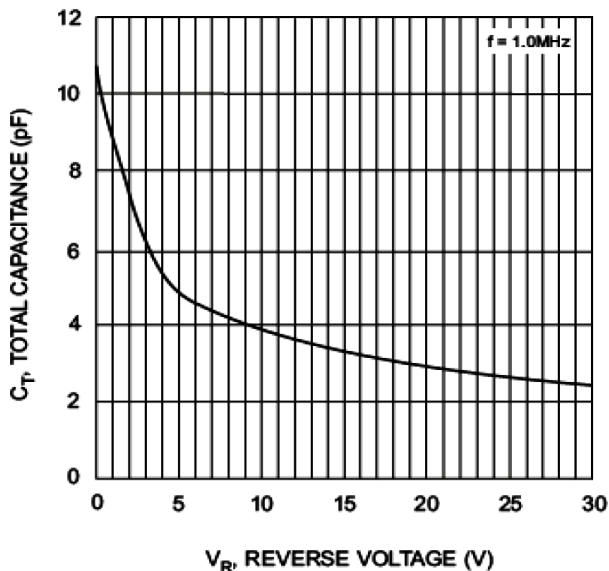


Fig. 3 Typical Capacitance vs. Reverse Voltage

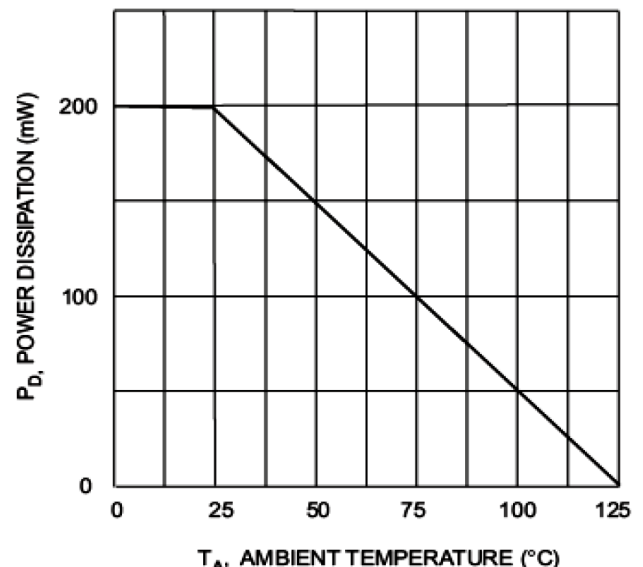
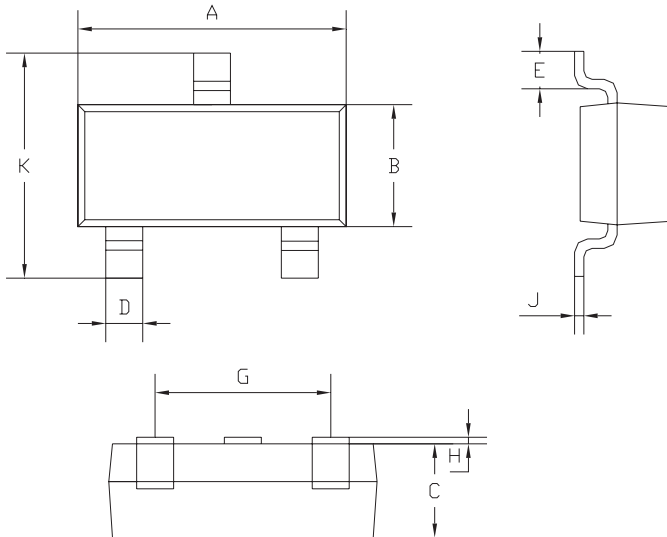


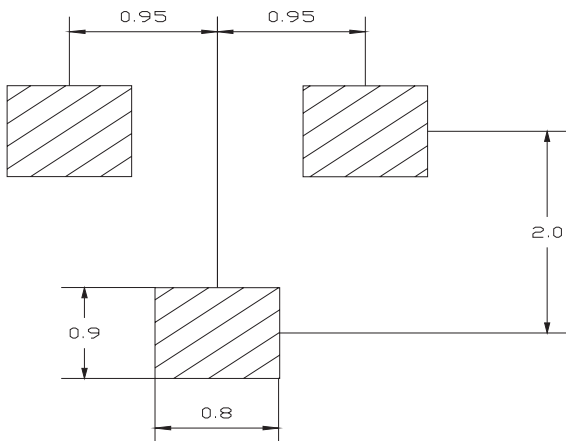
Fig. 4 Power Derating Curve

## Plastic surface mounted package



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1 Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45
All Dimensions in mm		

## Soldering Footprint



Unit : mm

## Package Information

Device	Package	Shipping
BAT54S-7-F	SOT-23	3,000 / Tape & Reel

## Part Number Table

Description	Part Number
Schottky Barrier Diode	BAT54S-7-F

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