

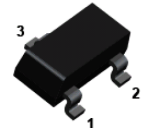
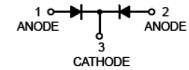
# Schottky Barrier Diode

**multicomp** PRO



## Features:

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



**SOT-23**

Marking Code: KL3

## 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	$I_{FRM}$	300	
Forward surge current @ $t_p < 1\text{s}$	$I_{FSM}$	600	
Power dissipation	$P_D$	250	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Thermal resistance junction to case	$R_{\theta JC}$	360	
Junction temperature	$T_J$	125	$^\circ\text{C}$
Operating and storage temperature	$T_j, T_{STG}$	-55 to +150	

## 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

\*pulse test,  $t_p \leq 300\mu\text{s}$

\*\*pulse test,  $t_p \leq 5\text{ms}$

Newark.com/multicomp-pro  
Farnell.com/multicomp-pro  
Element14.com/multicomp-pro

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## Typical Characteristics @ TA = 25°C unless otherwise specified

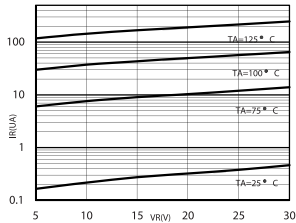


Fig. 1 - Typical Reverse Characteristic

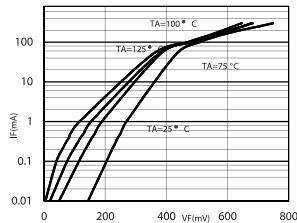


Fig. 2 - Typical Forward Characteristics

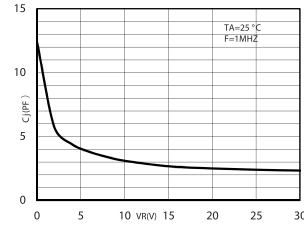


Fig. 3 - Capacitance Characteristics

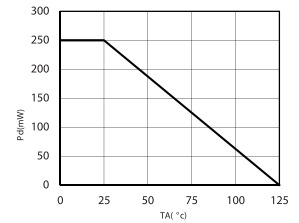
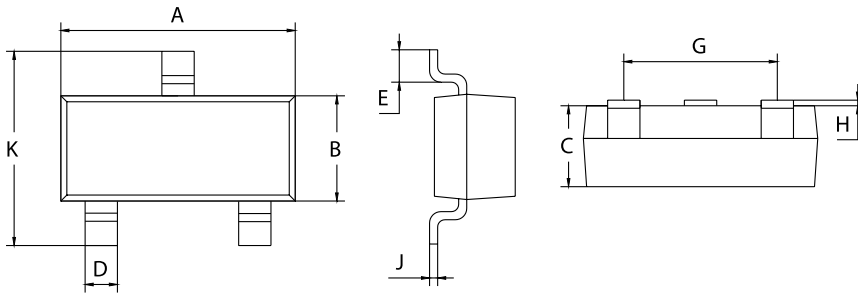


Fig. 4 - Derating Curve

## Package Outline Dimensions

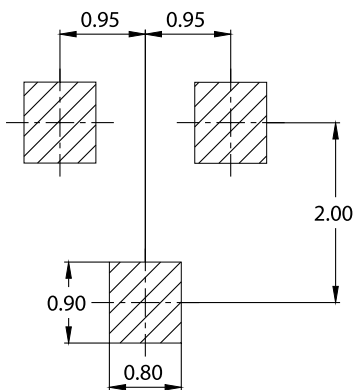
### SOT - 23



Dim.	Min.	Max.
A	2.7	3.1
B	1.1	1.5
C	0.9	1.1
D	0.3	0.5
E	0.35	0.48

Dim.	Min.	Max.
G	1.8	2
H	0.02	0.1
J	0.05	0.15
K	2.2	2.6

## Mounting Pad Layout



Dimensions : Millimetres

## Part Number Table

Description	Part Number
Schottky Barrier Diode	BAT54C-7-F

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