

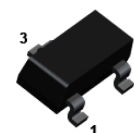
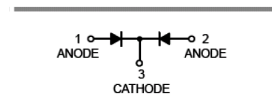
Schottky Barrier Diode

multicompPRO



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	V_{RRM}	30	V
Working peak	V_{RMS}		
DC reverse voltage	V_R		
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	μA
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

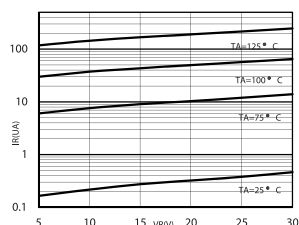


Fig. 1 - Typical Reverse Characteristic

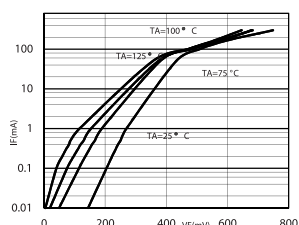


Fig. 2 - Typical Forward Characteristics

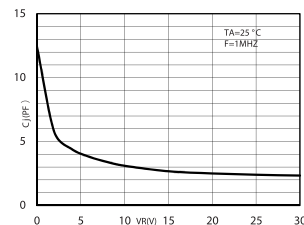


Fig. 3 - Capacitance Characteristics

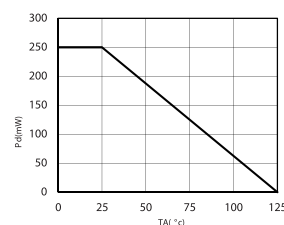
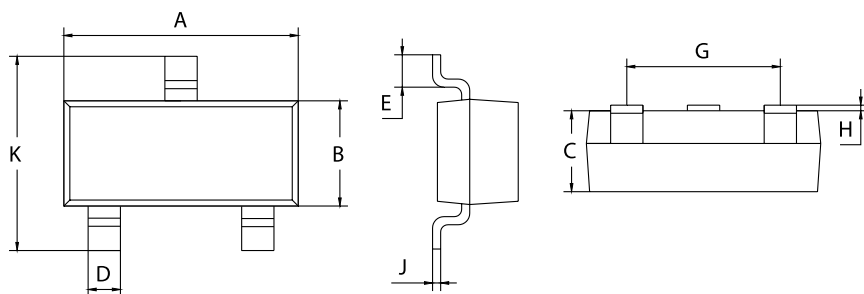


Fig. 4 - Derating Curve

Package Outline Dimensions

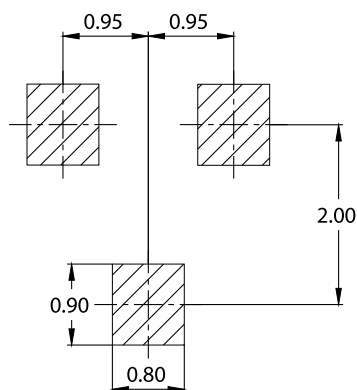
SOT - 23



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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