

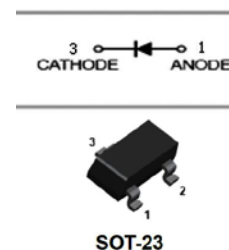
Surface Mount Switching Diode

RoHS
Compliant



Features

- Low leakage current applications.
- Medium speed switching times.
- Surface mount package ideally suited for automatic Insertion.



Applications

High speed switching application.

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

Characteristic	Symbol	Limits	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	85	V
RMS Reverse Voltage	$V_{R(RMS)}$	60	V
Forward Continuous Current	I_{FM}	215	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{ms}$ @ $t=1.0\text{s}$	I_{FSM}	4 1 0.5	A
Power Dissipation	P_d	250	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max.	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	85	-	-	V	$I_R = 100\mu\text{A}$
Forward Voltage	V_{FM}	-	-	0.9 1.0 1.1 1.25	V	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$
Reverse Leakage Current	I_R	-	-	5	nA	$V_R = 75\text{V}$
Junction Capacitance	C_j	-	2	-	pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	-	-	-	ns	$I_F = I_R = 10\text{mA}$, $t_{rr} = 0.1 \times I_R$

Surface Mount Switching Diode

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

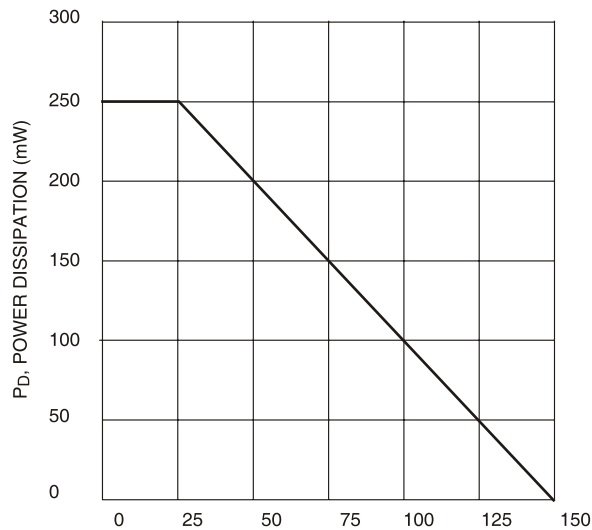


Fig. 1 Power Derating Curve

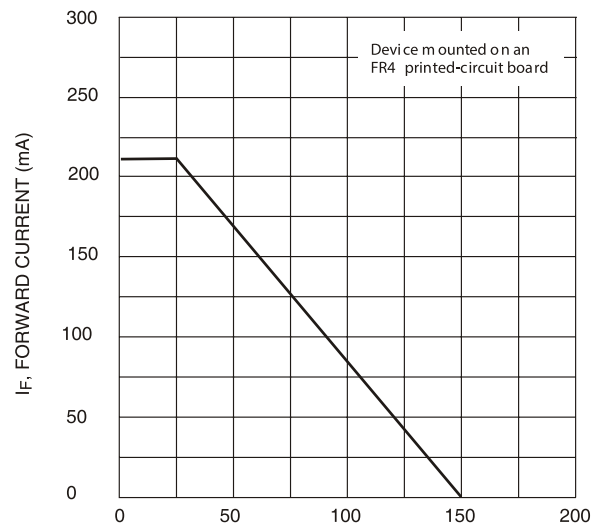


Fig. 2 Current Derating Curve

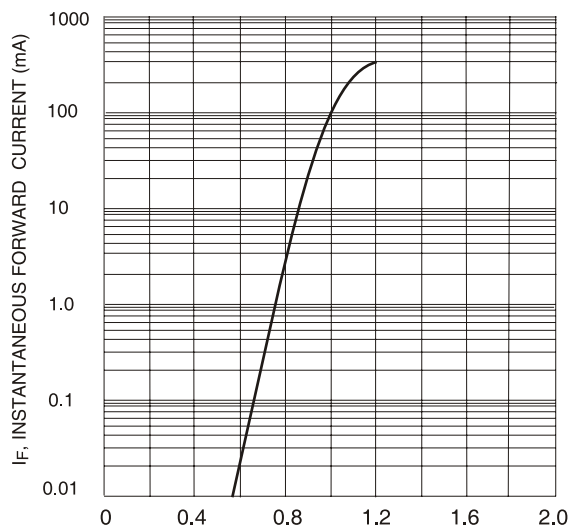


Fig. 3 Typical Forward Characteristics

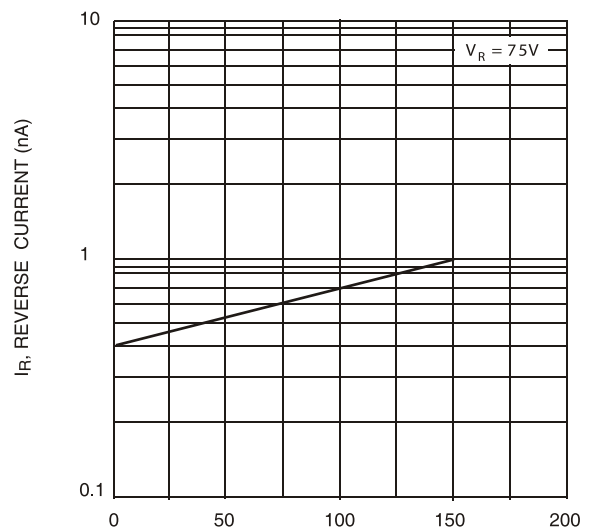
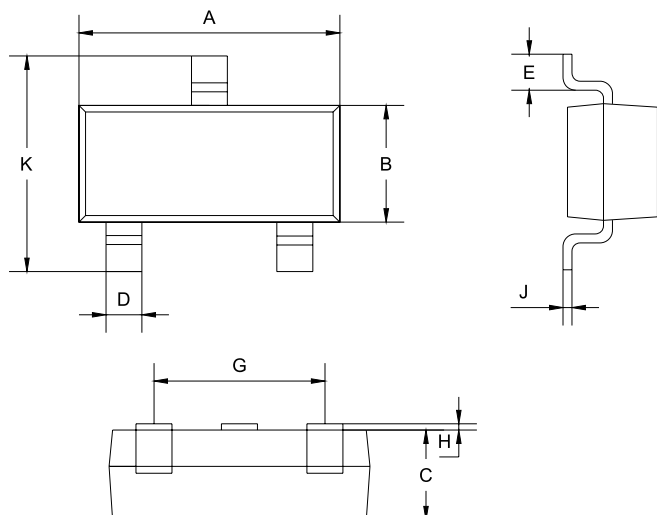


Fig. 4 Typical Reverse Characteristics

Surface Mount Switching Diode

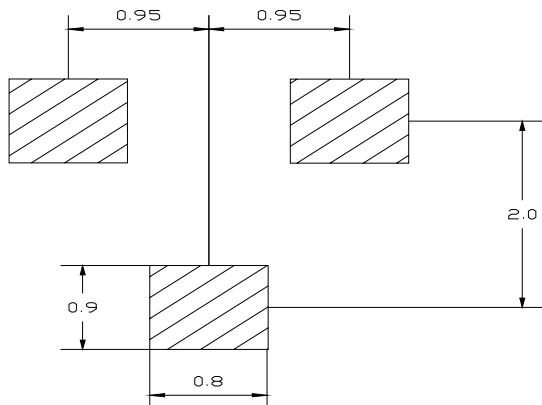
Package Outline

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



Dimension : Millimetres

Package Information

Device	Package	Shipping
BAS116	SOT-23	3000/Tape&Reel

Part Number Table

Description	Part Number
Surface mount switching diode	BAS116-7-F

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