

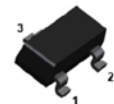
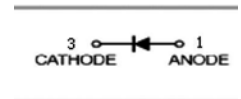
Surface Mount Switching Diode

RoHS
Compliant



Features

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



SOT-23

Applications

High speed switching application.

Maximum Rating @ TA = 25°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=1.0µs @t=1.0ms @t=1.0s	I_{FSM}	4 1 0.5	A
Power Dissipation	P_d	250	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	°C/W
Operating Junction Temperature Range	T_j	150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

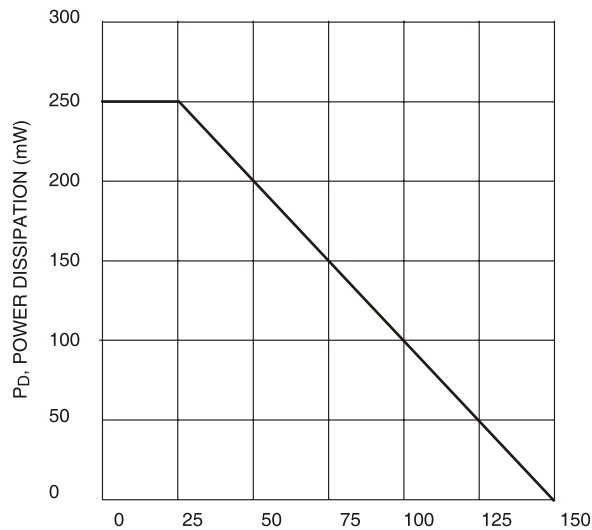
Electrical Characteristics @ TA = 25°C unless otherwise specified

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

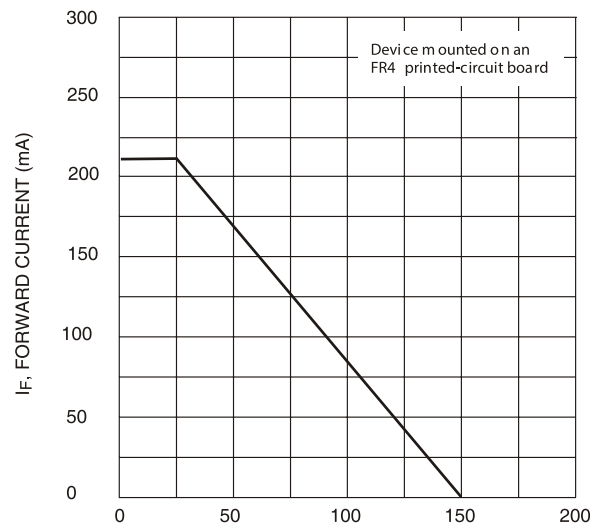
www.element14.com
www.farnell.com
www.newark.com

Surface Mount Switching Diode

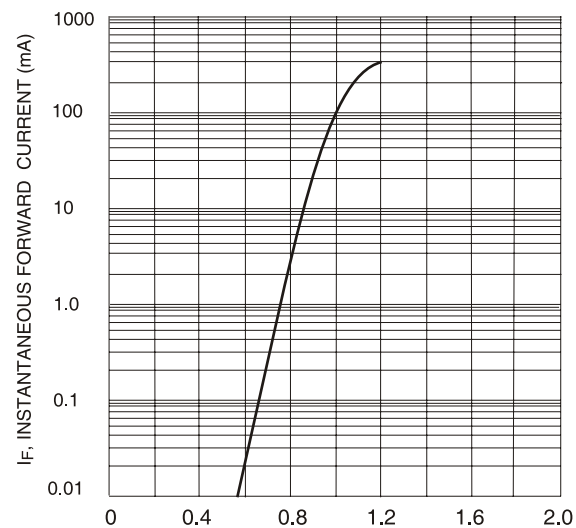
Typical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified



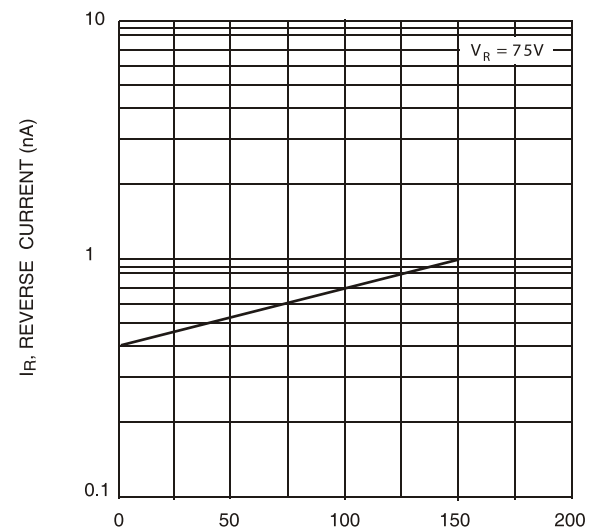
T_A , AMBIENT TEMPERATURE ($^\circ\text{C}$)
Fig. 1 Power Derating Curve



T_A , AMBIENT TEMPERATURE ($^\circ\text{C}$)
Fig. 2 Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 3 Typical Forward Characteristics

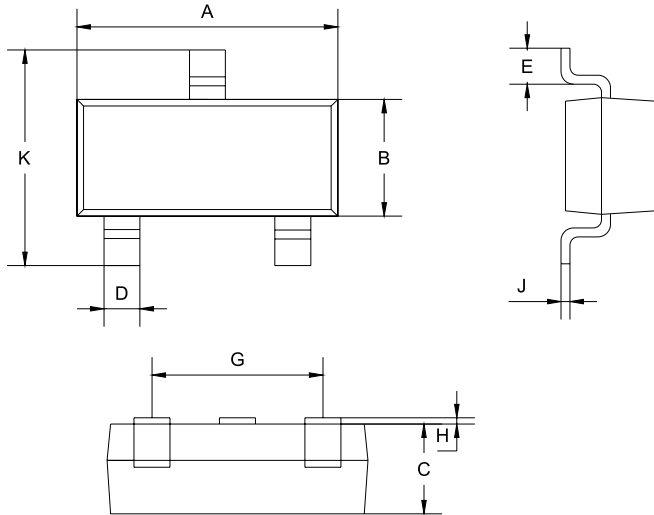


T_A , AMBIENT TEMPERATURE ($^\circ\text{C}$)
Fig. 4 Typical Reverse Characteristics

Surface Mount Switching Diode

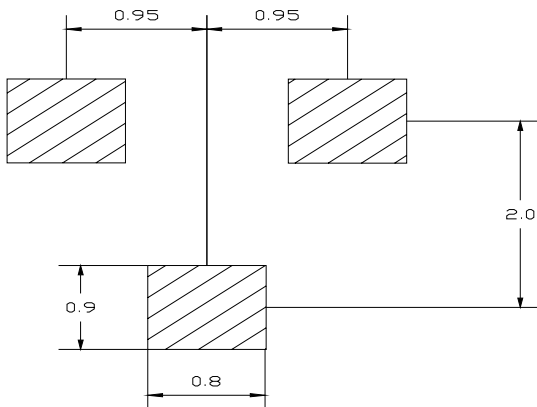
Package Outline

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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