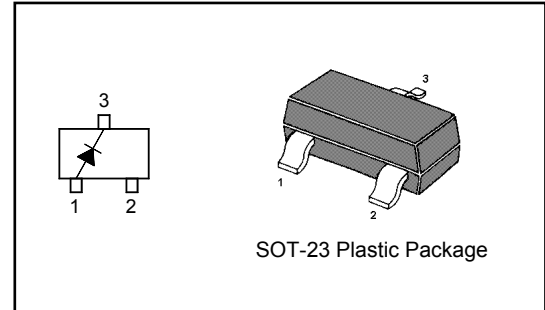


**BAS16 Silicon Epitaxial Planar Switching Diode**
**Features**

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance

**Applications**

- Ultra high speed switching application


**Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )**

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	85	V
Continuous Reverse Voltage	$V_R$	75	V
Continuous Forward Current	$I_F$	215	mA
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	4	A
		$t = 1\ \mu\text{s}$	
		$t = 1\ \text{ms}$	
	$t = 1\ \text{s}$	0.5	
Power Dissipation	$P_{tot}$	350	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

**Characteristics at  $T_a = 25\text{ }^\circ\text{C}$** 

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage				
at $I_F = 1\ \text{mA}$	$V_F$	-	715	mV
at $I_F = 10\ \text{mA}$	$V_F$	-	855	mV
at $I_F = 50\ \text{mA}$	$V_F$	-	1	V
at $I_F = 150\ \text{mA}$	$V_F$	-	1.25	V
Reverse Current				
at $V_R = 25\ \text{V}$	$I_R$	-	30	nA
at $V_R = 75\ \text{V}$	$I_R$	-	1	$\mu\text{A}$
at $V_R = 25\ \text{V}, T_J = 150\text{ }^\circ\text{C}$	$I_R$	-	30	$\mu\text{A}$
at $V_R = 75\ \text{V}, T_J = 150\text{ }^\circ\text{C}$	$I_R$	-	50	$\mu\text{A}$
Reverse Breakdown Voltage				
at $I_R = 100\ \mu\text{A}$	$V_{(BR)R}$	75	-	V
Diode Capacitance				
at $V_R = 0, f = 1\ \text{MHz}$	$C_d$	-	2	pF
Reverse Recovery Time				
at $I_F = I_R = 10\ \text{mA}, R_L = 50\ \Omega$	$t_{rr}$	-	4	ns

Typical Characteristics

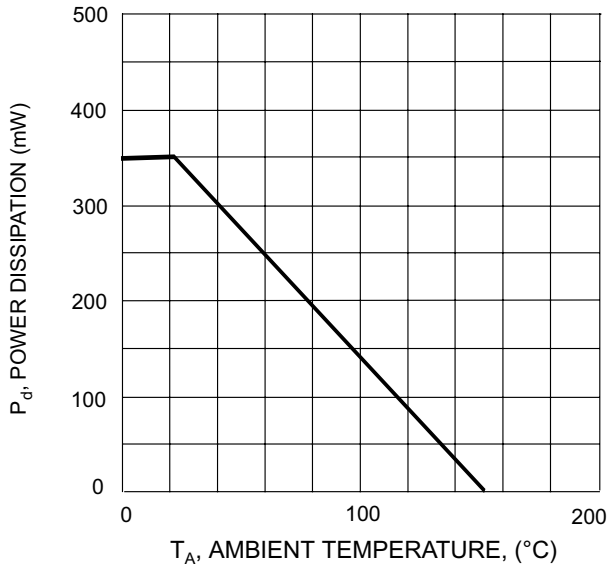


Fig. 1 Power Derating Curve

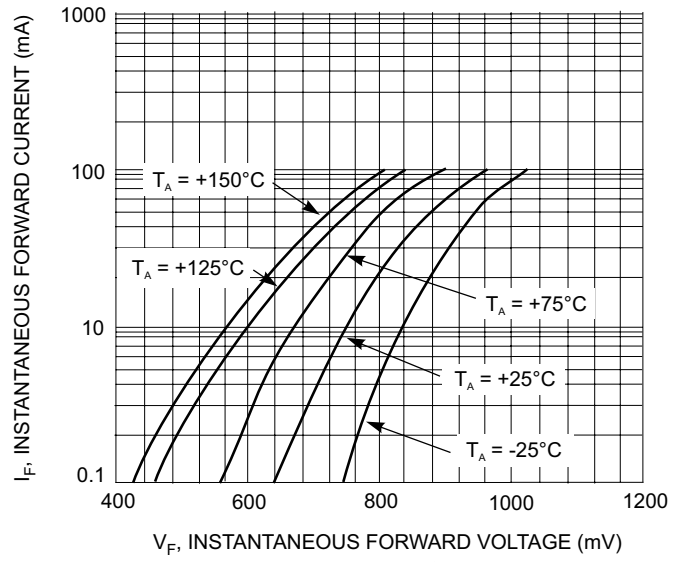


Fig. 2, Typical Forward Characteristics

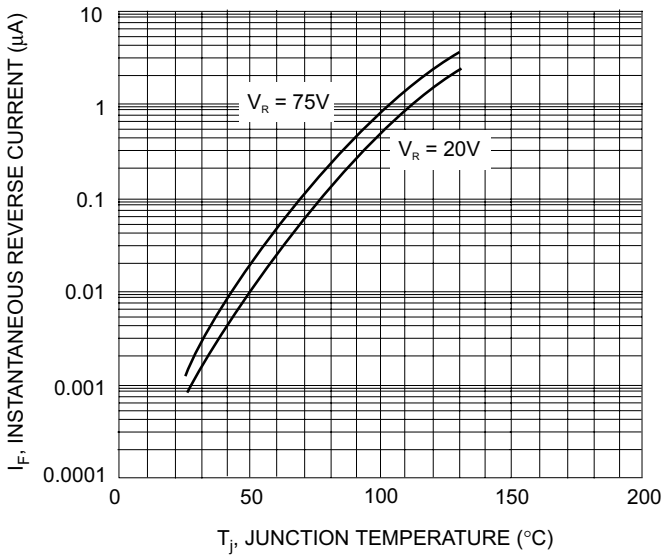


Fig. 3, Typical Reverse Characteristics

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

