



# BAS16

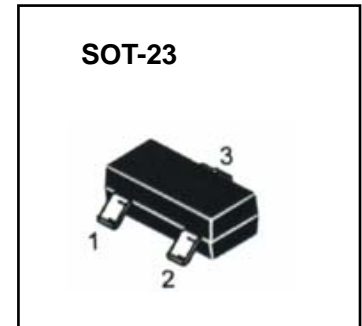
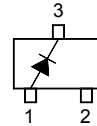
## Features

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

## Applications

- Ultra high speed switching application

Marking Code: 5D



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



### Typical Characteristics

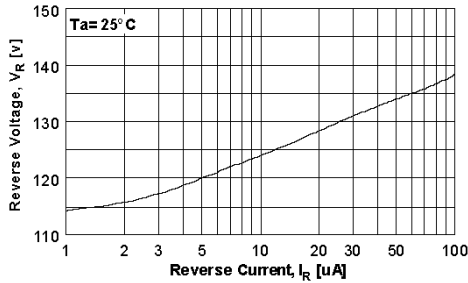


Figure 1. Reverse Voltage vs Reverse Current  
BV - 1.0 to 100 uA

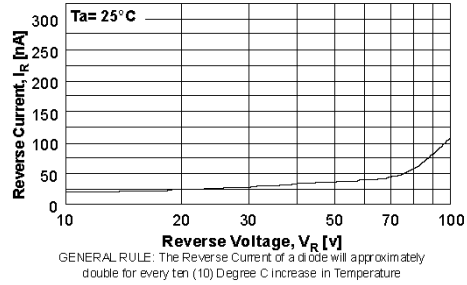


Figure 2. Reverse Current vs Reverse Voltage  
IR - 10 to 100 V

GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

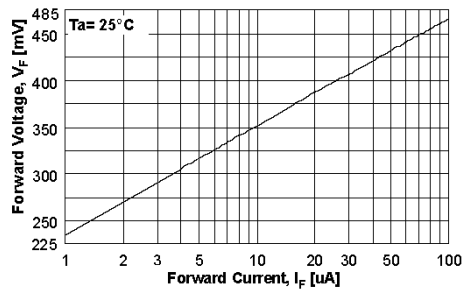


Figure 3. Forward Voltage vs Forward Current  
VF - 1.0 to 100 uA

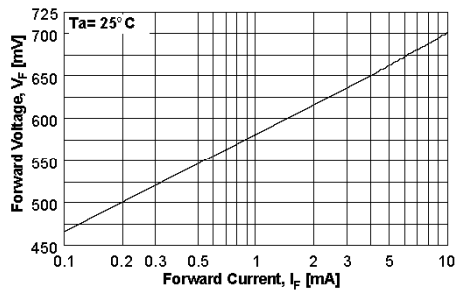


Figure 4. Forward Voltage vs Forward Current  
VF - 0.1 to 10 mA

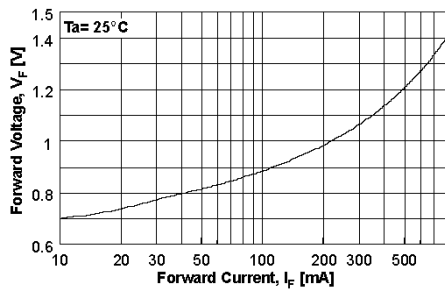


Figure 5. Forward Voltage vs Forward Current  
VF - 10 - 800 mA

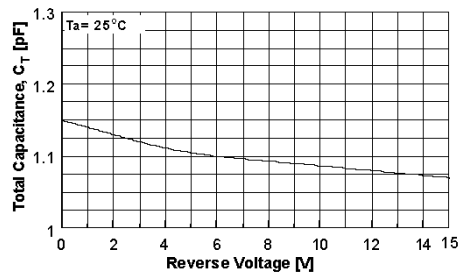


Figure 6. Total Capacitance





Package Dimensions

SOT-23

unit:mm

