

■ Switching Diodes

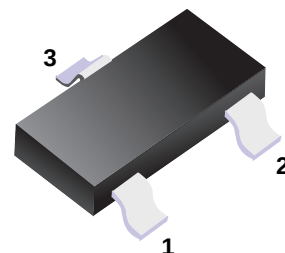
Features

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance

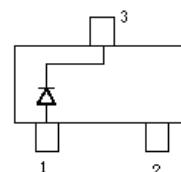
Marking Code

BAS16

A6



■ Simplified outline(SOT-23)



Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Average Rectified Output Current	I_O	200	mA
Forward Continuous Current	I_{FM}	300	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0 \mu s$ @ $t = 1.0s$	I_{FSM}	2.0	A
		1.0	
Power Dissipation	P_d	250	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	357	℃/W
Operating and Storage Temperature Range	T, T_{STG}	-55 to +150	℃

Electrical Characteristics (Ta=25℃ Unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100 \mu A$	75			V
Forward Voltage	V_F	$I_F = 1.0mA$			0.715	V
		$I_F = 10mA$			0.855	
		$I_F = 50mA$			1.0	
		$I_F = 150mA$			1.25	
Leakage Current	I_R	$V_R = 75V$			1.0	μA
		$V_R = 20V$			25	nA
Junction Capacitance	C_j	$V_R = 0, f = 1.0MHz$			2	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10mA, I_{ir} = 0.1 \times I_R, R_L = 100 \Omega$			4	ns

Typical Characteristic

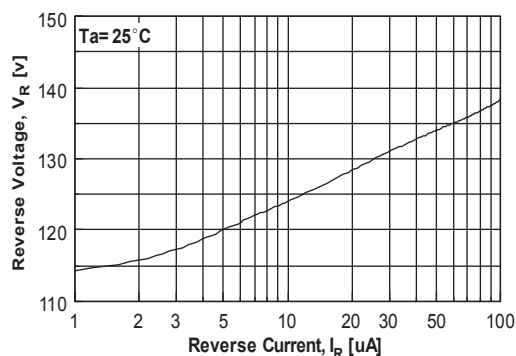


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 uA

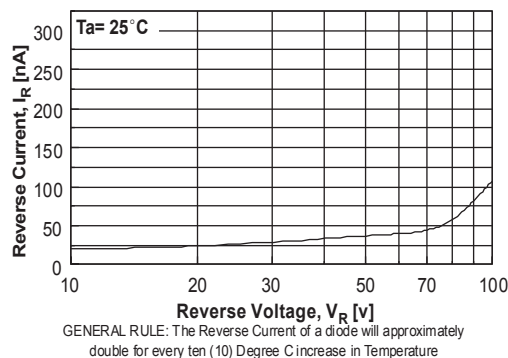


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

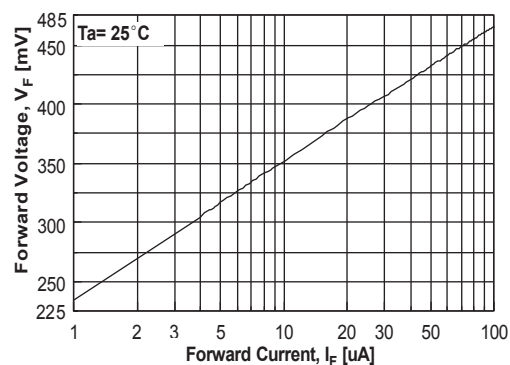


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

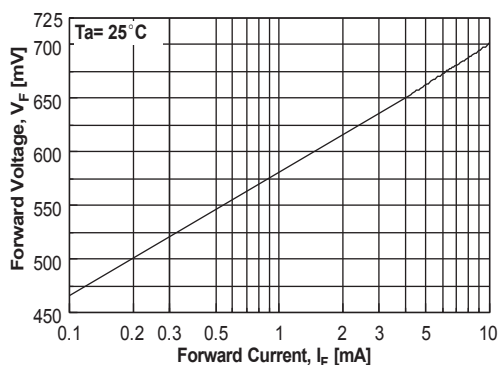


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

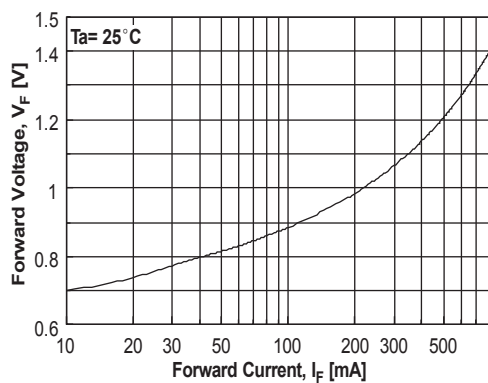


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

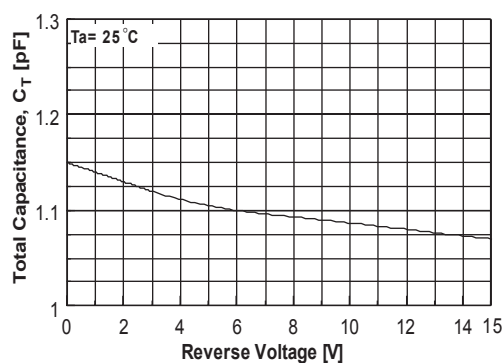
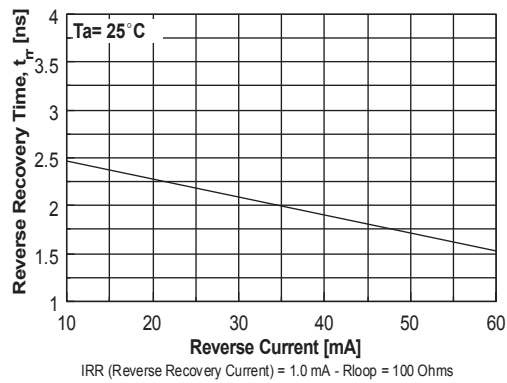
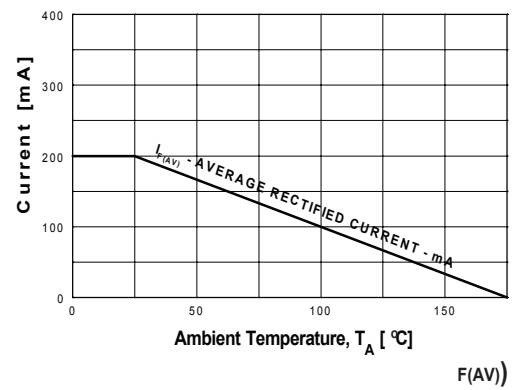


Figure 6. Total Capacitance

Typical Characteristic



**Figure 7. Reverse Recovery Time
vs Reverse Current**
TRR - IR 10 mA vs 60 mA



**Figure 8. Average Rectified Current (I_A)
versus Ambient Temperature (T)**

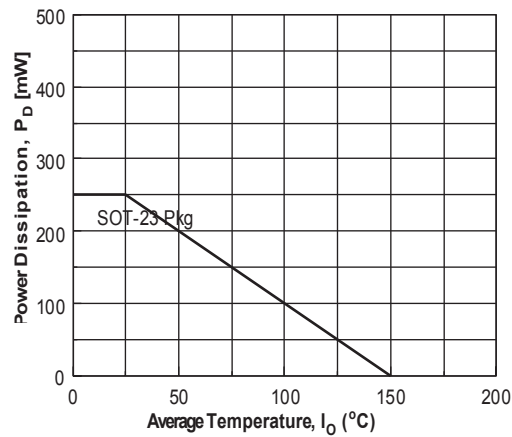


Figure 9. Power Derating Curve

Ordering information

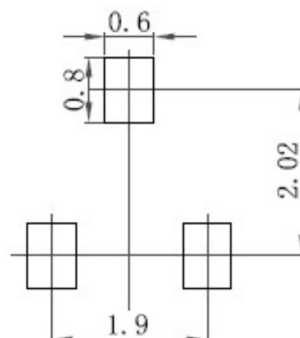
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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