

# BAS16

## SOT 23 High Speed Switching Diodes



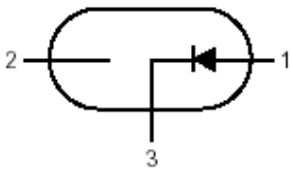
**Feature:**

- Silicon Planar Epitaxial High-Speed Diode.

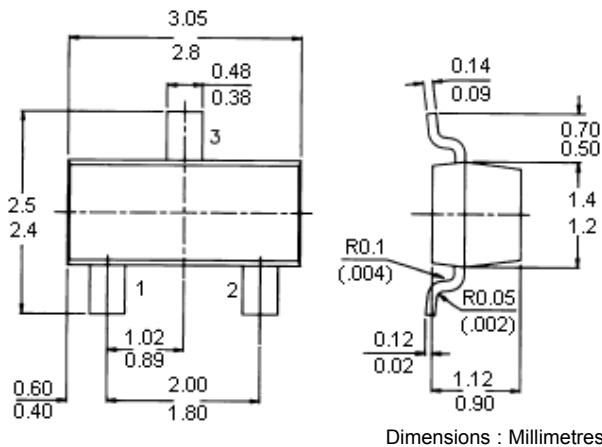
**Marking**  
BAS16 = A6

Pin configuration

- 1 = Anode
- 2 = NC
- 3 = Cathode



**Package Outline Details**



**Absolute Maximum Ratings**

Limiting values	Symbol		Value	Units
Continuous reverse voltage	$V_R$	Maximum	75	V
Repetitive peak reverse voltage	$V_{RRM}$		85	
Repetitive peak forward current	$I_{FRM}$		500	mA
Junction temperature	$T_j$		150	°C
Forward voltage at $I_F = 50\text{mA}$	$V_F$	<	1.0	V
Reverse recovery time when switched from $I_F = 10\text{mA}$ to $I_R = 10\text{mA}$ ; $R_L = 100\Omega$ ; measured at $I_R = 1\text{mA}$	$t_{rr}$		4	nS
Recovery charge when switched from $I_F = 10\text{mA}$ to $V_R = 5\text{V}$ ; $R_L = 100\Omega$	$Q_s$		45	pC



### Ratings (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values	Symbol		Value	Units
Continuous reverse voltage	V <sub>R</sub>	Maximum	75	V
Repetitive peak reverse voltage	V <sub>RRM</sub>		85	
Forward current (DC)	I <sub>F</sub>		215	mA
Repetitive peak forward current	I <sub>FRM</sub>		500	
Non-repetitive peak forward current (per crystal) t = 1μs t = 1ms t = 1s	I <sub>FSM</sub>		4 1 0.5	A
Storage temperature range	T <sub>stg</sub>	-	-55 to +150	°C
Junction temperature	T <sub>j</sub>	Maximum	150	
Thermal Resistance				
From junction to ambient	R <sub>th(j-a)</sub>	=	500	K/W

### Characteristics ( at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values	Symbol		Value	Units
$T_j = 25^\circ\text{C}$ unless otherwise specified.	-	-	-	-
Forward voltage $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$	$V_F$	<	715 855 1000 1250	mV
Reverse current $V_R = 25\text{V}; T_j = 150^\circ\text{C}$ $V_R = 75\text{V}$ $V_R = 75\text{V}; T_j = 150^\circ\text{C}$	$I_R$		30 1 50	mA
Diode capacitance $V_R = 0; f = 1\text{MHz}$	$C_d$		2	pF
Forward recovery voltage when switched to $I_F = 10\text{mA}$ ; $t_p = 20\text{ns}$	$V_{fr}$		1.75	V
Reverse recovery time when switched from $I_F = 10\text{mA}$ to $I_R 10\text{mA}$ ; $R_L = 100\Omega$ ; measured at $I_R = 1\text{mA}$	$t_{rr}$		4	ns
Recovery charge when switched from $I_F = 10\text{mA}$ to $V_R = 5\text{V}$ ; $R_L = 100\Omega$	$Q_s$		45	pC

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### Specifications

$V_{rrm}$ (V)	$I_{f(av)}$ (mA)	$V_f$ (V) at $I_f = 50mA$	Device Marking	Package	Type	Package	Part Number
85	200	1	A6	SOT-23	Single Diode	8mm Tape	BAS16



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### Notes:

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