

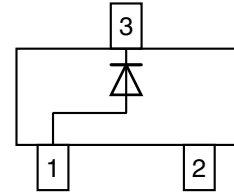
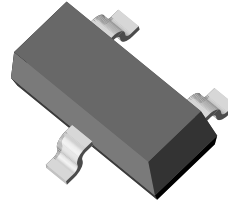
## Small Signal Fast Switching Diode

### Features

- Silicon Epitaxial Planar Diode
- Ultra fast switching speed
- Surface mount package ideally suited for automatic insertion
- High conductance
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



**RoHS**  
COMPLIANT



16923

### Mechanical Data

**Case:** SOT-23

**Weight:** approx. 8.0 mg

**Polarity:** cathode band

**Packaging Codes/Options:**

GS18 / 10 k per 13" reel (8 mm tape), 10 k/box

GS08 / 3 k per 7" reel (8 mm tape), 15 k/box

### Parts Table

Part	Ordering code	Marking	Remarks
BAS16-V	BAS16-V-GS18 or BAS16-V_GS08	A6	Tape and Reel

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Non repetitive peak reverse voltage		$V_{RM}$	100	V
Repetitive peak reverse voltage = Working peak reverse voltage = DC Blocking voltage		$V_{RRM} = V_{RWM} = V_R$	75	V
Peak forward surge current	$t_p = 1\text{ s}$	$I_{FSM}$	1	A
	$t_p = 1\text{ }\mu\text{s}$	$I_{FSM}$	2	A
Average forward current	Half wave rectification with resistive load and $f \geq 50\text{ MHz}$ , on ceramic substrate 8 mm x 10 mm x 0.7 mm	$I_{FAV}$	150	mA
Forward current	On ceramic substrate 8 mm x 10 mm x 0.7 mm	$I_F$	300	mA
Power dissipation	On ceramic substrate 8 mm x 10 mm x 0.7 mm	$P_{tot}$	350	mW

### Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction ambient	On ceramic substrate 8 mm x 10 mm x 0.7 mm	$R_{thJA}$	357	K/W
Junction and storage temperature range		$T_j = T_{stg}$	- 55 to + 150	$^{\circ}\text{C}$

### Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 1\text{ mA}$	$V_F$			715	mV
	$I_F = 10\text{ mA}$	$V_F$			855	mV
	$I_F = 50\text{ mA}$	$V_F$			1	V
	$I_F = 150\text{ mA}$	$V_F$			1.25	V
Reverse current	$V_R = 75\text{ V}$	$I_R$			1	$\mu\text{A}$
	$V_R = 75\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			50	$\mu\text{A}$
	$V_R = 25\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			30	$\mu\text{A}$
Diode capacitance	$V_R = 0, f = 1\text{ MHz}$	$C_D$			4	pF
Reverse recovery time	$I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$ , $V_R = 6\text{ V}, R_L = 100\ \Omega$	$t_{rr}$			6	ns

### Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

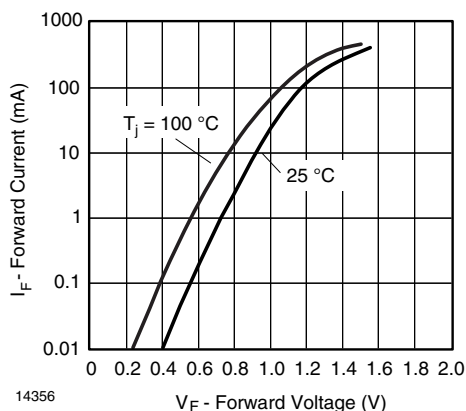


Figure 1. Forward Current vs. Forward Voltage

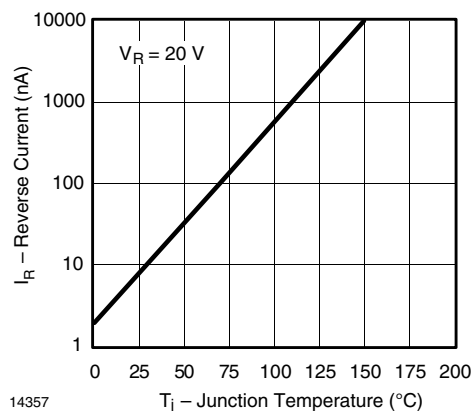
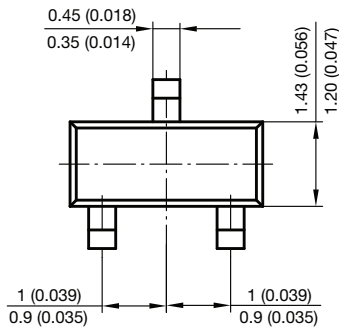
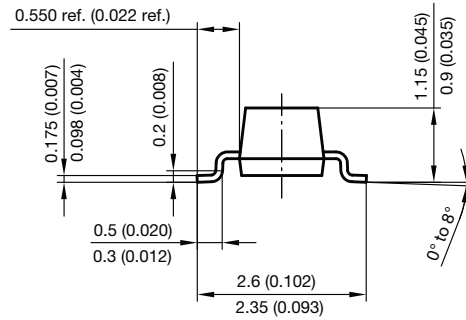
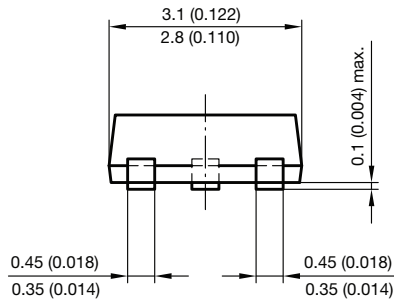
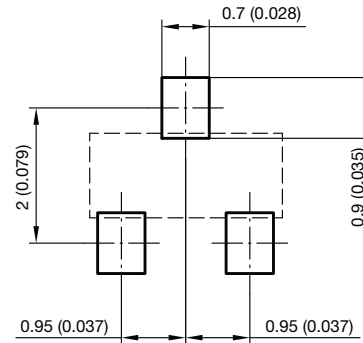


Figure 2. Reverse Current vs. Junction Temperature

## Package Dimensions in millimeters (inches): SOT-23



Foot print recommendation:



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17418



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