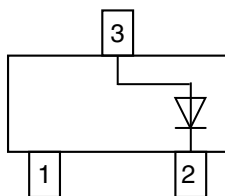
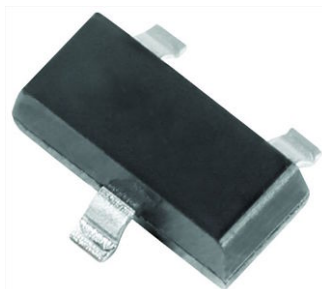


## Small Signal Fast Switching Diode



### FEATURES

- Fast switching speed
- Surface mount package
- Well suited for automated assembly process
- AEC-Q101 qualified
- Base P/N-G3 - green, commercial grade
- Material categorization:

For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### MECHANICAL DATA

**Case:** SOT-23

**Weight:** approx. 8.1 mg

**Packaging codes/options:**

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

### PARTS TABLE

PART	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
BAL99-G	BAL99-G3-08 or BAL99-G3-18	Single diode	JG	Tape and reel

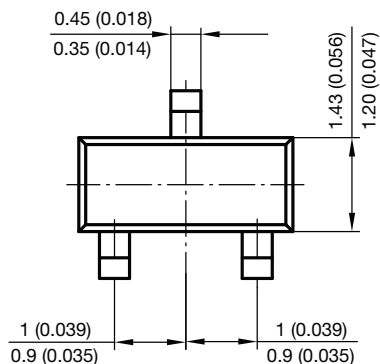
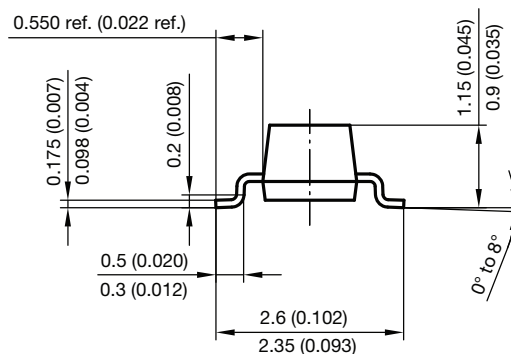
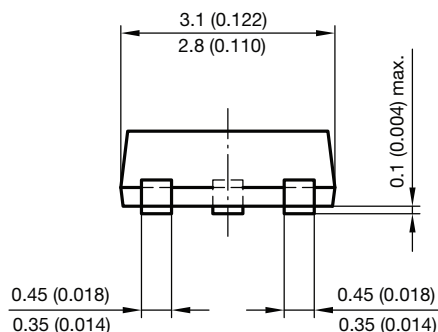
### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage = working peak reverse voltage = DC blocking voltage		$V_{RRM} = V_{RWM} = V_R$	70	V
Peak forward surge current	$t_p = 1 \mu\text{s}$	$I_{FSM}$	2	A
	$t_p = 1 \text{ ms}$	$I_{FSM}$	1	A
	$t_p = 1 \text{ s}$	$I_{FSM}$	0.5	A
Average forward current		$I_{FAV}$	250	mA
Power dissipation	On fiberglass substrate 30 mm x 10 mm x 1.6 mm	$P_{tot}$	350	mW

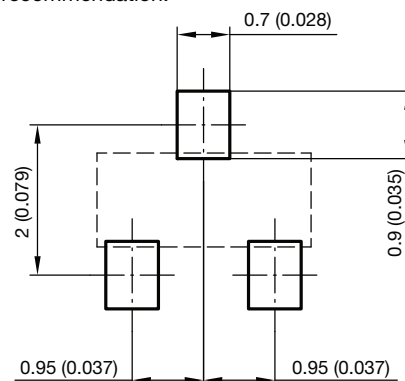
### THERMAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	On fiberglass substrate 30 mm x 10 mm x 1.6 mm	$R_{thJA}$	357	K/W
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 55 to + 150	$^{\circ}\text{C}$
Operating temperature range		$T_{op}$	- 55 to + 150	$^{\circ}\text{C}$

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 1\text{ mA}$	$V_F$			0.715	V
	$I_F = 10\text{ mA}$	$V_F$			0.855	V
	$I_F = 50\text{ mA}$	$V_F$			1	V
	$I_F = 150\text{ mA}$	$V_F$			1.25	V
Reverse current	$V_R = 70\text{ V}$	$I_R$			2.5	$\mu\text{A}$
	$V_R = 70\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	$I_R$			100	$\mu\text{A}$
	$V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	$I_R$			30	$\mu\text{A}$
Diode capacitance	$V_F = V_R = 0, f = 1\text{ MHz}$	$C_D$			1.5	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}, i_R = 1\text{ mA}$	$t_{rr}$			6	ns

**PACKAGE DIMENSIONS** in millimeters (inches): **SOT-23**


Foot print recommendation:



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Rev. 8 - Date: 23.Sept.2009  
17418



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# Mouser Electronics

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