

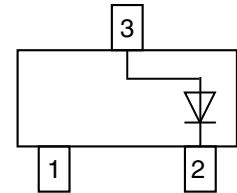
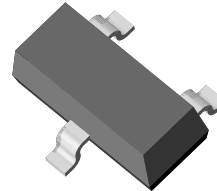
## Small Signal Fast Switching Diode

### Features

- Fast switching speed
- Surface mount package
- Well suited for automated assembly process
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



**RoHS**  
COMPLIANT



17435

### Mechanical Data

**Case:** SOT-23

**Weight:** approx. 8 mg

**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	Type Marking	Remarks
BAL99-V	BAL99-V-GS18 or BAL99-V-GS08	JF	Tape and Reel

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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	$t = 1\ \mu\text{s}$	$I_{FSM}$	2	A
	$t = 1\ \text{ms}$	$I_{FSM}$	1	A
	$t = 1\ \text{s}$	$I_{FSM}$	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

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

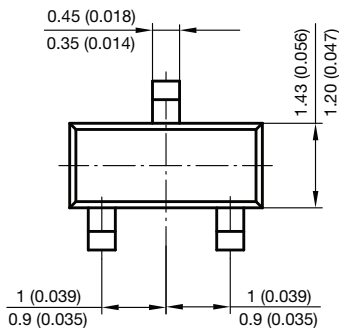
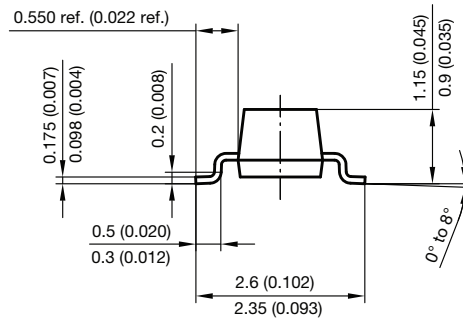
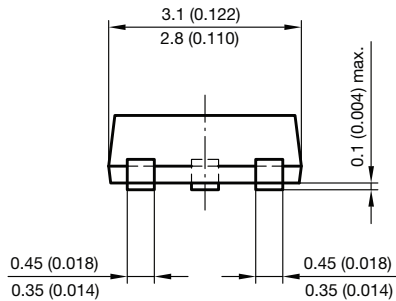
Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air	On fiberglass substrate 30 mm x 10 mm x 1.6 mm	$R_{thJA}$	357	K/W
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 55 to + 150	$^{\circ}\text{C}$

### Electrical Characteristics

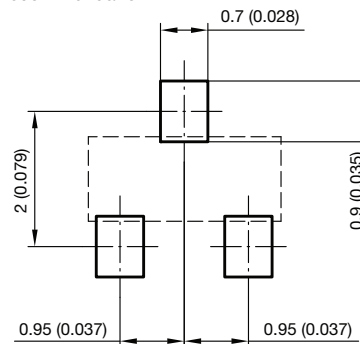
$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

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
	$I_F = 50\text{ mA}$	$V_F$			1000	mV
	$I_F = 150\text{ mA}$	$V_F$			1250	mV
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	$I_F = I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$ , $R_L = 100\text{ }\Omega, V_R = 6\text{ V}$	$t_{rr}$			6	ns

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



Foot print recommendation:



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