

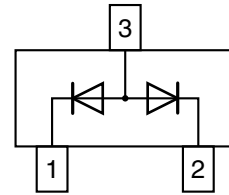
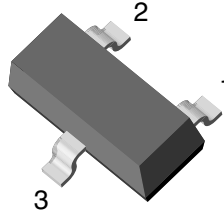
## Small Signal Switching Diode, Dual

### Features

- Silicon Epitaxial Planar Diode
- Fast switching dual diode with common anode
- This diode is also available in other configurations including: a single with type designation BAL99, a dual anode to cathode with type designation BAV99, and a dual common cathode with type designation BAV70.
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS  
COMPLIANT



17033

### Mechanical Data

**Case:** SOT-23

**Weight:** approx. 8.8 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	Marking	Remarks
BAW56-V	BAW56-V-GS18 or BAW56-V-GS08	JD	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		$V_R = V_{RRM}$	70	V
Forward continuous current		$I_F$	250	mA
Non repetitive peak forward current	$t_p = 1\text{ }\mu\text{s}$	$I_{FSM}$	2	A
	$t_p = 1\text{ ms}$	$I_{FSM}$	1	A
	$t_p = 1\text{ s}$	$I_{FSM}$	0.5	A
Power dissipation		$P_{tot}$	350 <sup>1)</sup>	mW

<sup>1)</sup> Device on fiberglass substrate, see layout

### Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		$R_{thJA}$	430	K/W
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$

<sup>1)</sup> Device on fiberglass substrate, see layout

### 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	$V_F = V_R = 0, f = 1\text{ MHz}$	$C_D$			2	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

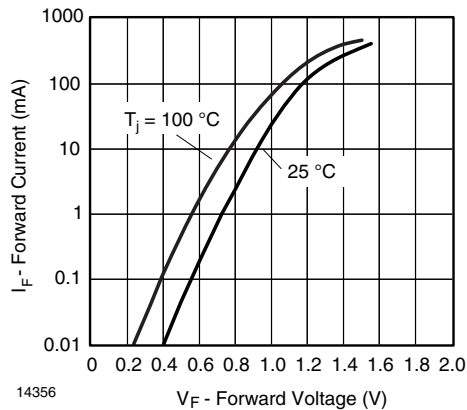


Figure 1. Forward Current vs. Forward Voltage

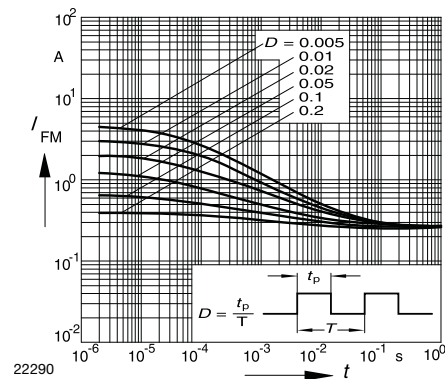
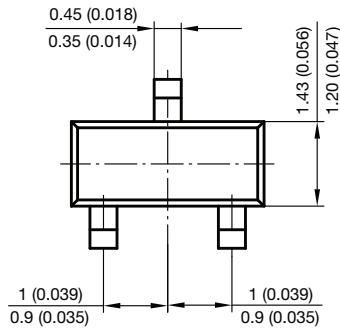
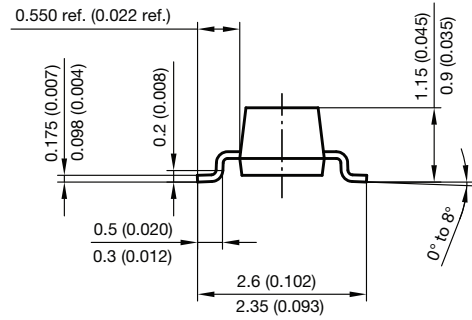
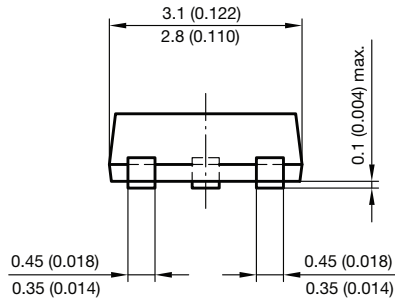
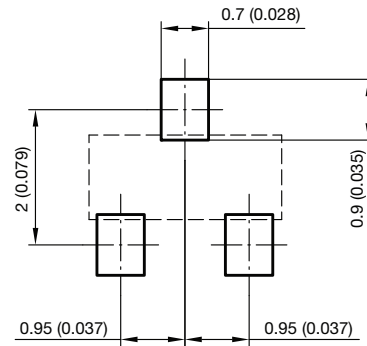


Figure 2. Peak forward current  $I_{FM} = f(t_p)$

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



Foot print recommendation:



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