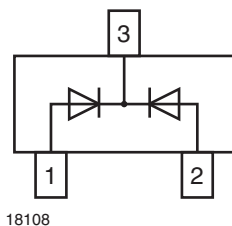


## Small Signal Switching Diode, Dual



### FEATURES

- Silicon Epitaxial Planar Diode
- Fast switching dual diode with common cathode
- This diode is also available in other configurations including: a dual with type designation BAV99-V, a dual common anode with type designation BAW56-V, and a single diode with type designation BAL99-V
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### MECHANICAL DATA

**Case:** SOT-23

**Weight:** approx. 8.8 mg

**Packaging codes/options:**

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

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

### PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	INT. CONSTRUCTION	REMARKS
BAV70-V	BAV70-GS18 or BAV70-V-GS08	JJ	Dual common cathode	Tape and reel

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Peak reverse voltage		$V_{RRM}$	70	V
Reverse voltage		$V_R$	70	V
Forward current (continuous)		$I_F$	250	mA
Non repetitive peak forward 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
Power dissipation <sup>(1)</sup>		$P_{tot}$	350	mW

#### Note

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

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air <sup>(1)</sup>		$R_{thJA}$	430	K/W
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_J = T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$

#### Note

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

<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	$V_R = 70\text{ V}$	$I_R$			2500	nA
	$V_R = 70\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	$I_R$			50	$\mu\text{A}$
	$V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	$I_R$			30	$\mu\text{A}$
Diode capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_D$			1.5	pF
Reverse recovery time	$I_F = 10\text{ mA}$ to $i_R = 1\text{ mA}$ , $V_R = 6\text{ V}, R_L = 100\text{ }\Omega$	$t_{rr}$			6	ns

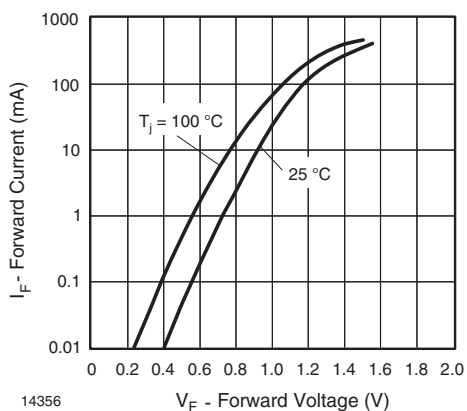
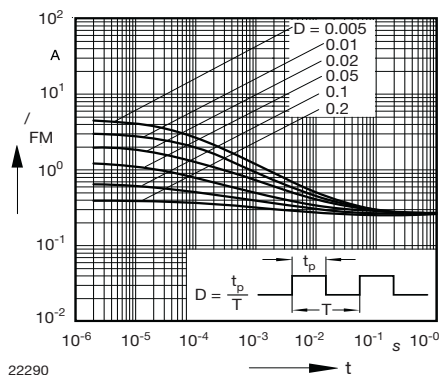
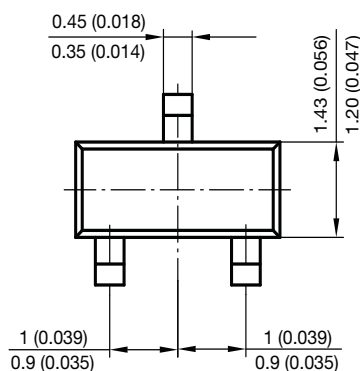
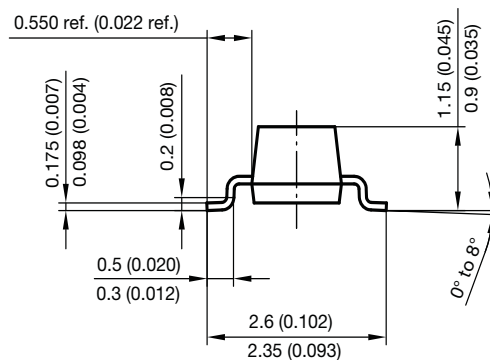
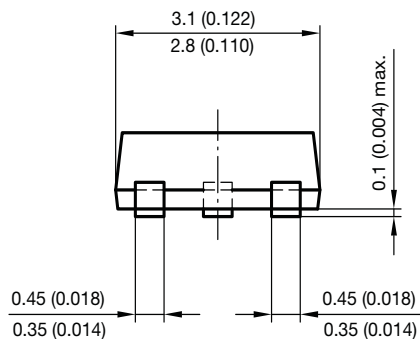
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

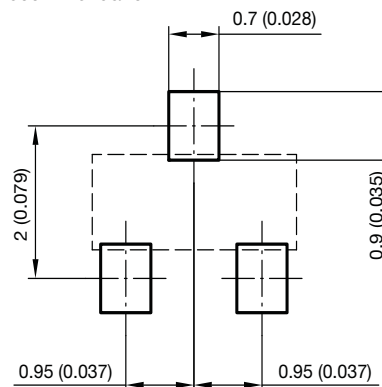

Fig. 2 - Peak forward current/ $F_M = f(t_p)$



**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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