

Vishay Semiconductors

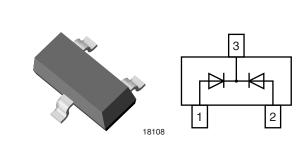
Small Signal Switching Diode, Dual

Features

- Silicon epitaxial planar diode
- Fast switching dual diode with common cathode
- This diode is also available in other configurations including:a dual common anode to cathode 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
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

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
BAV70-V	BAV70-V-GS18 or BAV70-V-GS08	JJ	Tape and Reel

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit	
Reverse voltage, peak reverse voltage		V _R , V _{RM}	70	V	
Forward current (continuous)		١ _F	250	mA	
Non repetitive peak forward current	t _p = 1 μs	I _{FSM}	2	А	
	t _p = 1 ms	I _{FSM}	1	А	
	t _p = 1 s	I _{FSM}	0.5	А	
Power dissipation		P _{tot}	350 ¹⁾	mW	

¹⁾ Device on fiberglass substrate, see layout

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Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit	
Thermal resistance junction to ambient air		R _{thJA}	430 ¹⁾	°C/W	
Junction temperature		Тj	150	°C	
Storage temperature range		$T_j = T_{stg}$	- 65 to + 150	°C	

¹⁾ Device on Fiberglass substrate, see layout on second page.

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Тур.	Max.	Unit
Forward voltage	I _F = 1 mA	V _F			715	mV
	l _F = 10 mA	V _F			855	mV
	I _F = 50 mA	V _F			1	V
	l _F = 150 mA	V _F			1.25	V
Reverse current	V _R = 70 V	I _R			2.5	μA
	V _R = 70 V, T _j = 150 °C	I _R			50	μA
	V _R = 25 V, T _j = 150 °C	I _R			30	μA
Diode capacitance	V _R = 0, f = 1 MHz	CD			1.5	pF
Reverse recovery time	$I_F = 10 \text{ mA to } I_R = 1 \text{ mA},$ $V_R = 6 \text{ V}, \ R_L = 100 \Omega$	t _{rr}			6	ns

Typical Characteristics

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

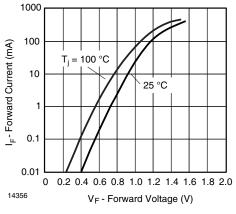


Figure 1. Forward Current vs. Forward Voltage

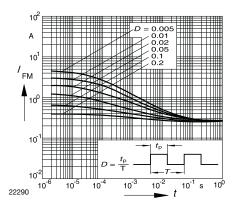


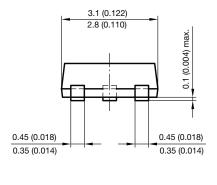
Figure 2. Peak Forward Current $I_{FM} = f(t_p)$

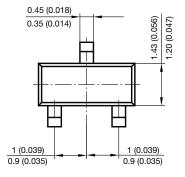


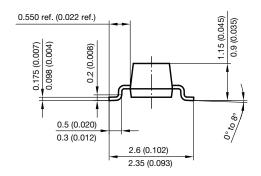
BAV70-V

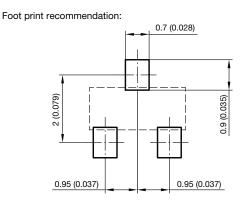
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Package Dimensions in millimeters (inches): SOT-23









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