

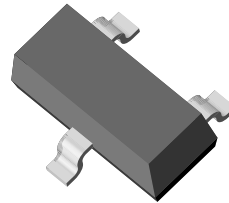
Small Signal Switching Diode, Dual

Features

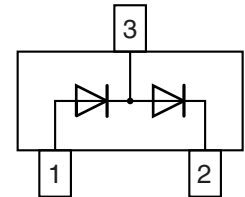
- Fast switching speed
- High conductance
- Surface mount package ideally suited for automatic insertion
- Connected in series
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT



18109



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
BAV99-V	BAV99-V-GS18 or BAV99-V-GS08	JE	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Non repetitive peak reverse voltage		V_{RM}	100	V
Repetitive peak reverse voltage = Working peak reverse voltage = DC Blocking voltage		$V_{RRM} = V_{RWM} = V_R$	70	V
Peak forward surge current	$t_p = 1\text{ s}$	I_{FSM}	1	A
	$t_p = 1\text{ }\mu\text{s}$	I_{FSM}	4.5	A
Average forward current	Half wave rectification with resistive load and $f \geq 50\text{ MHz}$, on ceramic substrate 10 mm x 8 mm x 0.7 mm	I_{FAV}	150	mA
Forward current	On ceramic substrate 10 mm x 8 mm x 0.7 mm	I_F	250	mA
Power dissipation	On ceramic substrate 10 mm x 8 mm x 0.7 mm	P_{tot}	300	mW



Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Junction ambient	On ceramic substrate 10 mm x 8 mm x 0.7 mm	R _{thJA}	430	K/W
Junction and storage temperature range		T _j = T _{stg}	- 55 to + 150	°C

Electrical Characteristics

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

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I _F = 1 mA	V _F			715	mV
	I _F = 10 mA	V _F			855	mV
	I _F = 50 mA	V _F			1	V
	I _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	C _D			1.5	pF
Reverse recovery time	I _F = 10 mA to I _R = 1 mA, V _R = 6 V, R _L = 100 Ω	t _{rr}			6	ns

Typical Characteristics

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

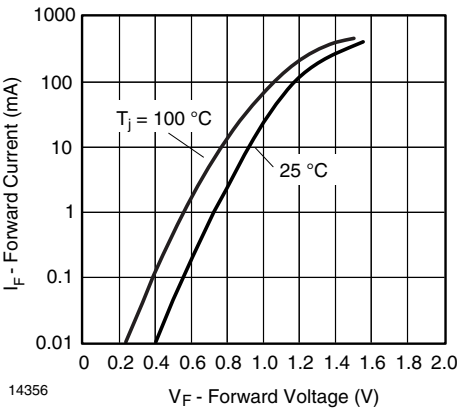


Figure 1. Forward Current vs. Forward Voltage

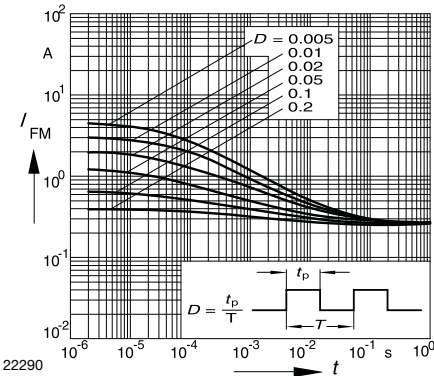


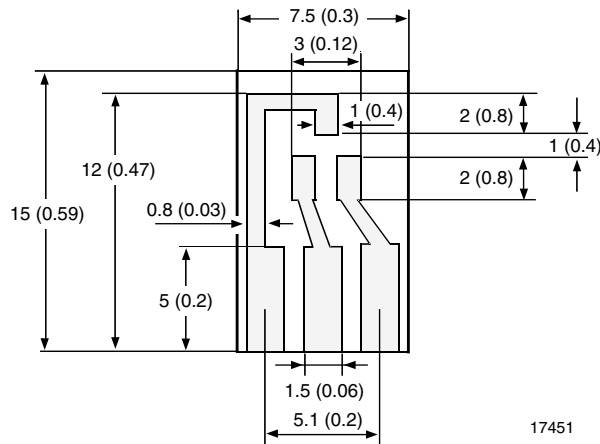
Figure 2. Peak forward current I_{FM} = f(t_p)

Layout for R_{thJA} test

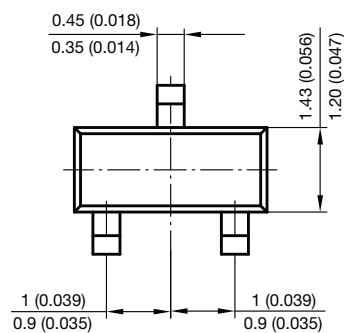
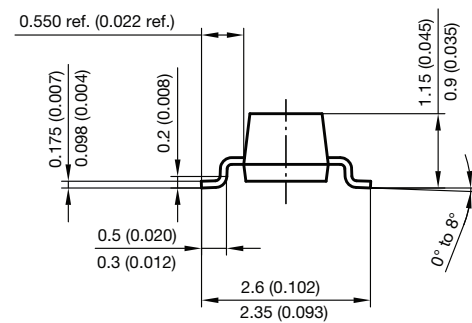
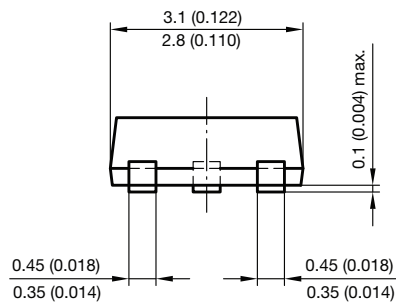
Thickness:

Fiberglass 1.5 mm (0.059 in.)

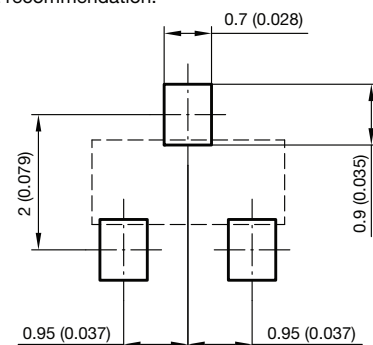
Copper leads 0.3 mm (0.012 in.)



Package Dimensions in millimeters (inches): SOT-23



Foot print recommendation:



Document no.: 6.541-5014.01-4

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17418



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