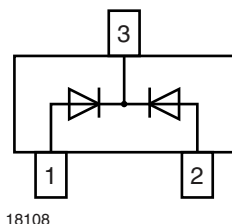


Small Signal Switching Diode, Dual



FEATURES

- Silicon Epitaxial Planar Diode
- Fast switching dual diode with common cathode
- AEC-Q101 qualified
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

MECHANICAL DATA

Case: SOT-23

Weight: approx. 8.8 mg

Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

PARTS TABLE

PART	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
BAV70	BAV70-E3-08 or BAV70-E3-18	Dual diodes common cathode	JJ	Tape and reel
	BAV70-HE3-08 or BAV70-HE3-18			

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 ⁽¹⁾		P_{tot}	350	mW

Note

⁽¹⁾ Device on fiberglass substrate

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air ⁽¹⁾		R_{thJA}	430	K/W
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 65 to + 150	$^{\circ}\text{C}$
Operating temperature range		T_{op}	- 55 to + 150	$^{\circ}\text{C}$

Note

⁽¹⁾ Device on fiberglass substrate

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			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	μA
	$V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	I_R			30	μA
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

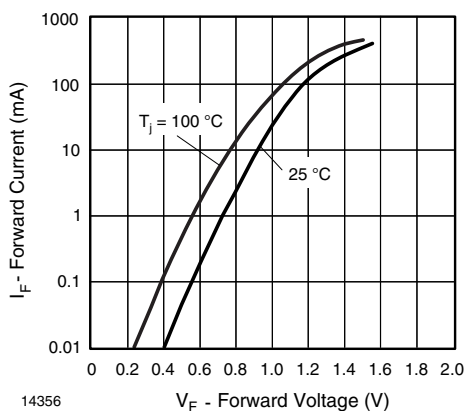
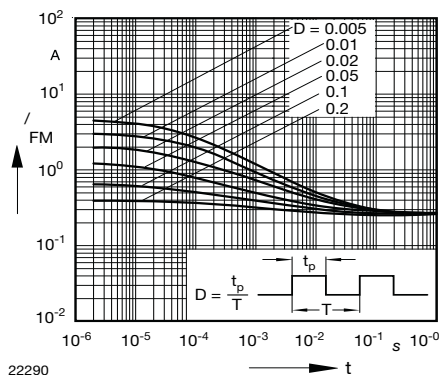
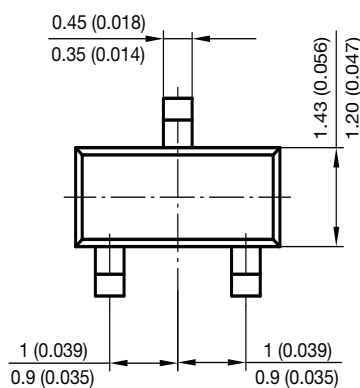
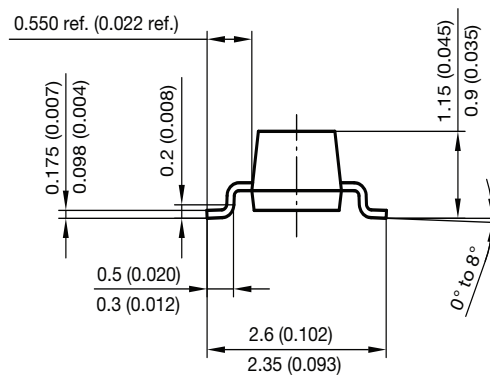
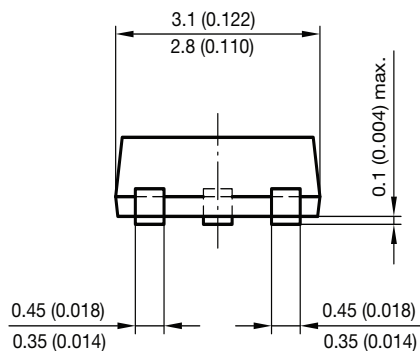
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

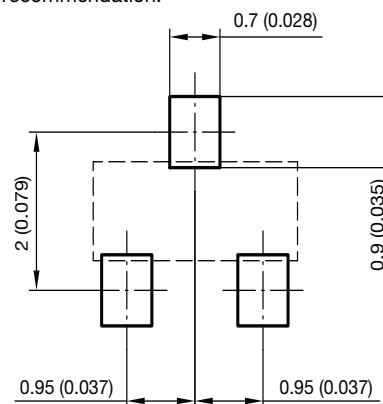

Fig. 2 - Peak forward current/ $F_M = f(t_p)$



PACKAGE DIMENSIONS in millimeters (inches): **SOT-23**



Foot print recommendation:



Document no.: 6.541-5014.01-4
Rev. 8 - Date: 23.Sept.2009
17418



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