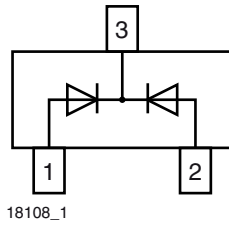


Small Signal Switching Diode, Dual



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
BAV23C	BAV23C-E3-08 or BAV23C-E3-18	Dual diodes common cathode	KT6	Tape and reel
	BAV23C-HE3-08 or BAV23C-HE3-18			

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Continuous reverse voltage		V_R	200	V
Repetitive peak reverse voltage		V_{RRM}	250	V
Non-repetitive peak forward current	$t = 1\ \mu\text{s}$	I_{FSM}	9	A
Non-repetitive peak forward surge current	$t = 1\ \text{s}$	I_{FSM}	0.5	A
Maximum average forward rectified current ⁽¹⁾		$I_{F(AV)}$	200	mA
Forward continuous current ⁽²⁾		I_F	400	mA
Repetitive peak forward current		I_{FRM}	625	mA
Power dissipation ⁽²⁾		P_{tot}	350	mW

Notes

⁽¹⁾ Measured under pulse conditions; pulse time = $t_p \leq 0.3\ \text{ms}$

⁽²⁾ Device on fiberglass substrate

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air ⁽¹⁾		R_{thJA}	357	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
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$, $t_p = 300\text{ ms}$	$V_{(BR)}$	250			V
Forward voltage	$I_F = 100\text{ mA}$	V_F			1	V
	$I_F = 200\text{ mA}$	V_F			1.25	V
Reverse current	$V_R = 200\text{ V}$	I_R			100	nA
	$V_R = 200\text{ V}$, $T_j = 150\text{ }^{\circ}\text{C}$	I_R			100	μA
Dynamic forward resistance	$I_F = 10\text{ mA}$	r_f		5		Ω
Diode capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_D			5	pF
Reverse recovery time	$I_F = I_R = 30\text{ mA}$, $R_L = 100\text{ }\Omega$ $i_R = 3\text{ mA}$	t_{rr}			50	ns

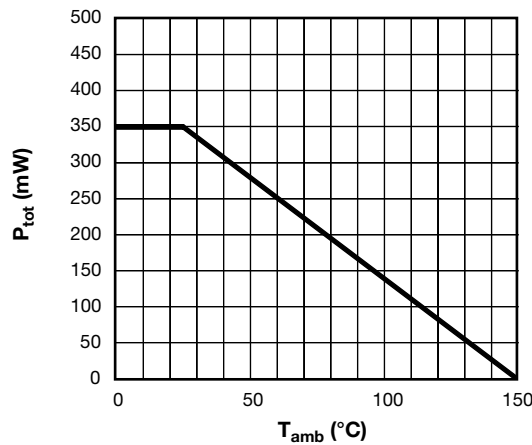


Fig. 1 - P_{tot} - Admissible Power Dissipation vs. Ambient Temperature

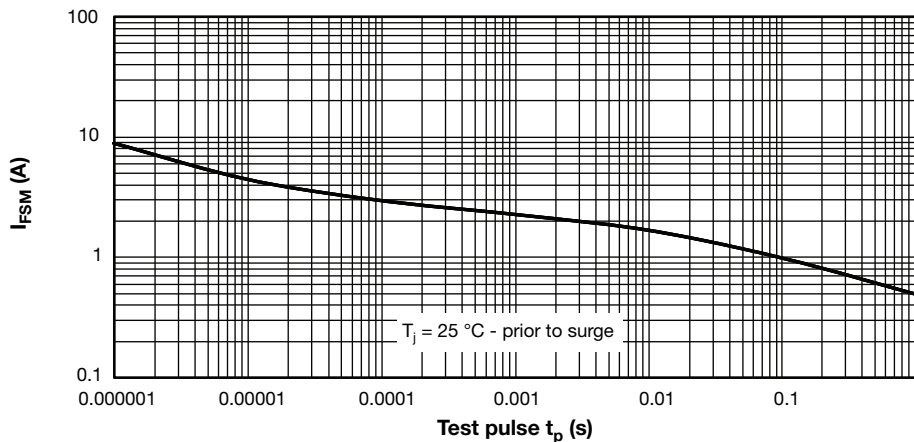
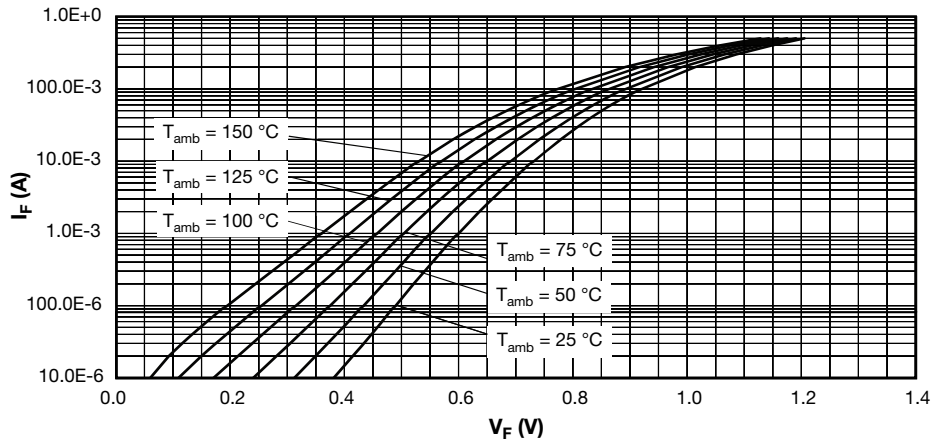
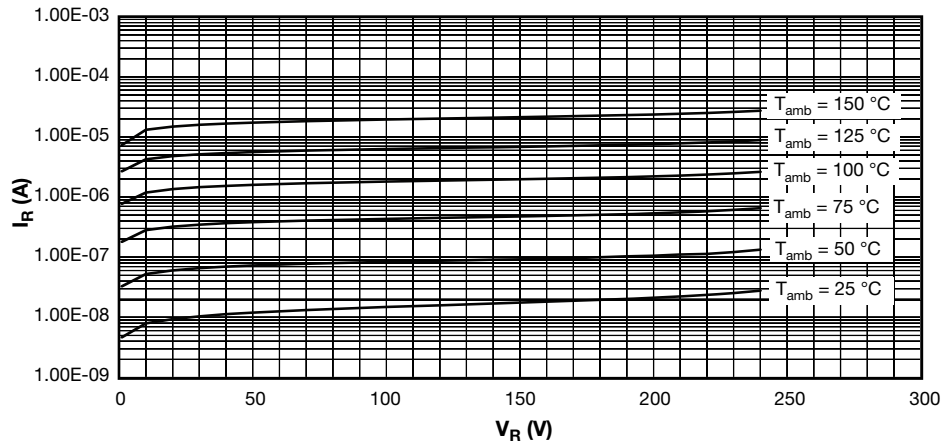
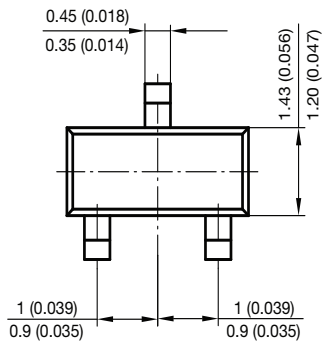
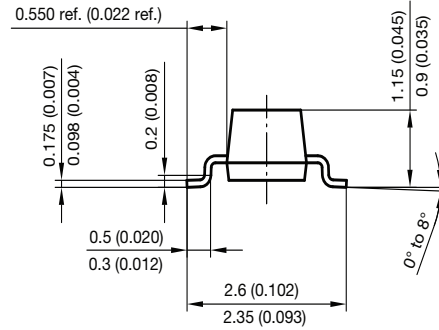
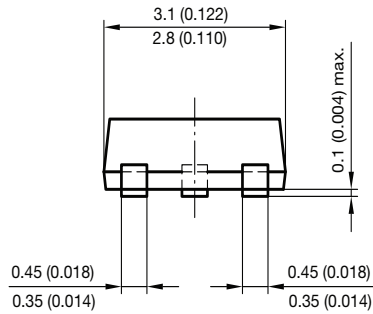


Fig. 2 - I_{FSM} - Non-Repetitive Peak Forward Current vs. Pulse Duration - Maximum Admissible Values of Square Pulses

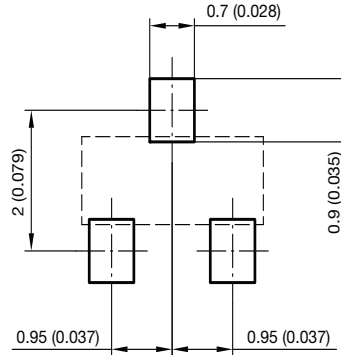

 Fig. 3 - V_F - Typical Forward Current vs. Forward Voltage vs. Various Temperatures

 Fig. 4 - I_R - Typical Reverse Current vs. Reverse Voltage vs. Various Temperatures



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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