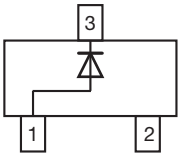
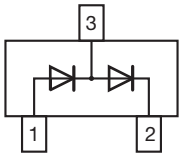
Small Signal Schottky Diodes, Single and Dual

BAS40-00

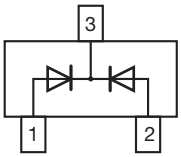


Top View

BAS40-04

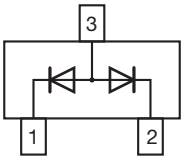


BAS40-05



Top View

BAS40-06



FEATURES

- These diodes feature very low turn-on voltage and fast switching
- These devices are protected by a PN junction guardring against excessive voltage, such as electrostatic discharges
- 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

Pb-free

e3

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
BAS40-00	BAS40-00-E3-08 or BAS40-00-E3-18	Single diode	43	Tape and reel
	BAS40-00-HE3-08 or BAS40-00-HE3-18			
BAS40-04	BAS40-04-E3-08 or BAS40-04-E3-18	Dual diodes serial	44	
	BAS40-04-HE3-08 or BAS40-04-HE3-18			
BAS40-05	BAS40-05-E3-08 or BAS40-05-E3-18	Dual diodes common cathode	45	
	BAS40-05-HE3-08 or BAS40-05-HE3-18			
BAS40-06	BAS40-06-E3-08 or BAS40-06-E3-18	Dual diodes common anode	46	
	BAS40-06-HE3-08 or BAS40-06-HE3-18			

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		$V_{RRM} = V_{RWM} = V_R$	40	V
Forward continuous current (1)		I_F	200	mA
Surge forward current (1)	$t_p < 1$ s	I_{FSM}	600	mA
Power dissipation (1)		P_{tot}	200	mW

Note
(1) Device on fiberglass substrate, see layout on next page.

THERMAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air (1)		R_{thJA}	500	K/W
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C
Operating temperature range		T_{op}	- 55 to + 125	°C

Note
(1) Device on fiberglass substrate, see layout on next page.

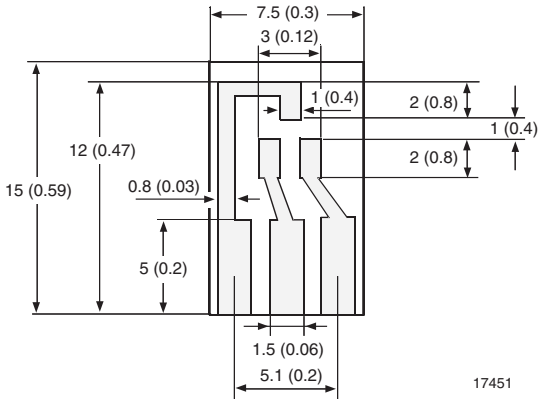
ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Reverse breakdown voltage	I_R = 10 µA (pulsed)	$V_{(BR)}$	40			V
Leakage current	V_R = 30 V	I_R		20	100	nA
Forward voltage	I_F = 1 mA	V_F			380	mV
Forward voltage [1]	I_F = 40 mA	V_F			1000	mV
Diode capacitance	V_R = 0 V, f = 1 MHz	C_D		4	5	pF
Reverse recovery time	$I_F = I_R$ = 10 mA, i_R = 1 mA, R_L = 100 Ω	t_{rr}			5	ns

Note

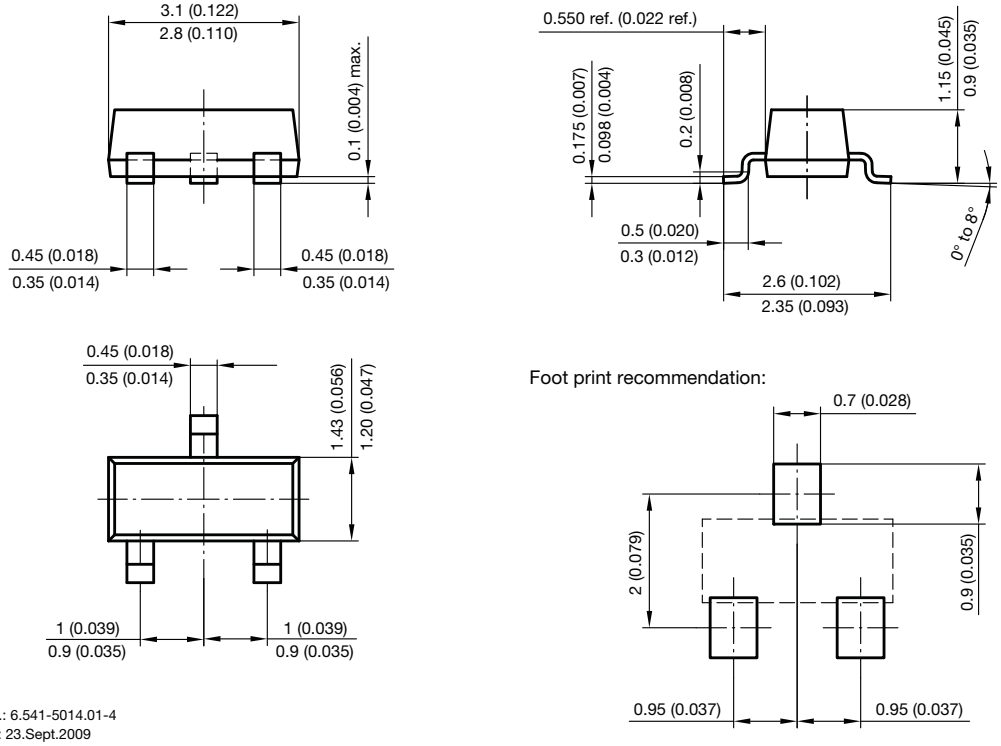
(1) Pulse test t_p < 300 µs

LAYOUT FOR R_{thJA} TEST

Thickness:
Fiberglass 1.5 mm (0.059 inches)
Copper leads 0.3 mm (0.012 inches)



PACKAGE DIMENSIONS in millimeters (inches): SOT-23



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

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