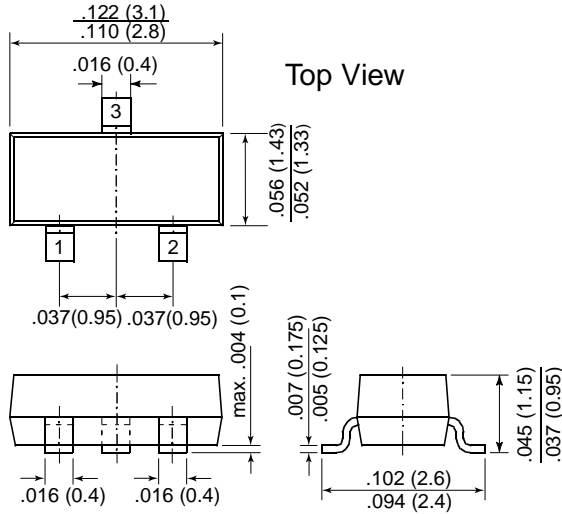




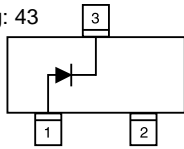
TO-236AB (SOT-23)



Dimensions in inches and (millimeters)

BAS40

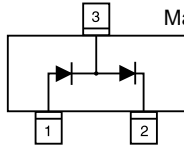
Marking: 43



Top View

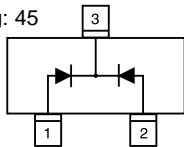
BAS40-04

Marking: 44



BAS40-05

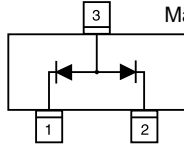
Marking: 45



Top View

BAS40-06

Marking: 46



Features

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

Mechanical Data

Case: SOT-23 Plastic Package

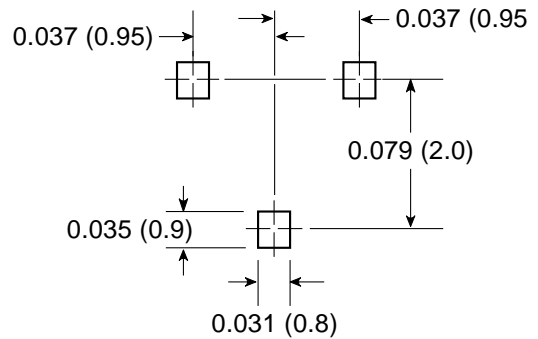
Weight: approx. 0.008g

Packaging Codes/Options:

E8/10K per 13" reel (8mm tape), 30K/box

E9/3K per 7" reel (8mm tape), 30K/box

Mounting Pad Layout



Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	40	V
Forward Continuous Current at T _{amb} = 25°C	I _F	200 ⁽¹⁾	mA
Surge Forward Current at t _p < 1 s, T _{amb} = 25°C	I _{FSM}	600 ⁽¹⁾	mA
Power Dissipation ⁽¹⁾ at T _{amb} = 25°C	P _{tot}	200 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	R _{thJA}	430 ⁽¹⁾	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _S	-55 to +150	°C

Note:

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

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V _{(BR)R}	I _R = 10μA (pulsed)	40	—	—	V
Leakage Current	I _R	Pulse Test t _p < 300μs V _R = 30V	—	20	100	nA
Forward Voltage	V _F	Pulse Test t _p < 300μs I _F = 1mA I _F = 40mA	— —	— —	380 1000	mV mV
Capacitance	C _{tot}	V _R = 0V f = 1MHz	—	4.0	5	pF
Reverse Recovery Time	t _{rr}	I _F = 10mA, I _R = 10mA I _{rr} = 1mA, R _L = 100Ω	—	—	5	ns

Note:

(1) Device on fiberglass substrate, see layout.

Layout for R_{thJA} test

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

