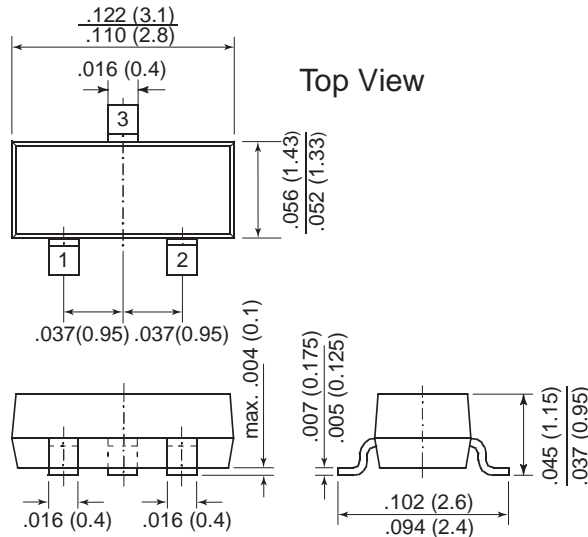


## Schottky Diodes



TO-236AB (SOT-23)



### 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

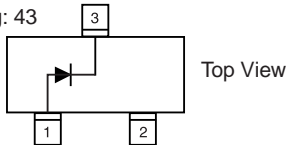
#### Packaging Codes/Options:

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

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

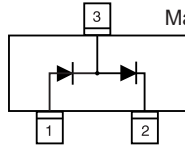
**BAS40**

Marking: 43



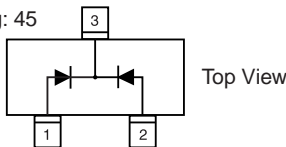
**BAS40-04**

Marking: 44



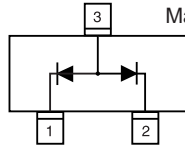
**BAS40-05**

Marking: 45

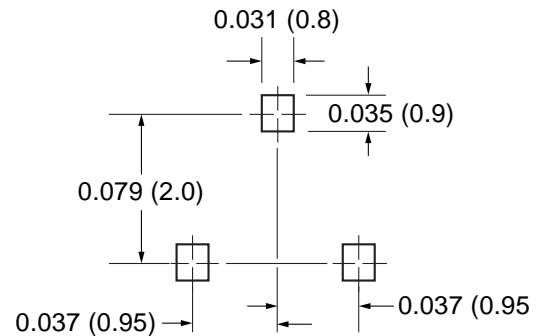


**BAS40-06**

Marking: 46



### Mounting Pad Layout



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

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

**Note:**

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

## Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

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

**Note:**

(1) Device on fiberglass substrate, see layout.

## Layout for R<sub>thJA</sub> test

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

