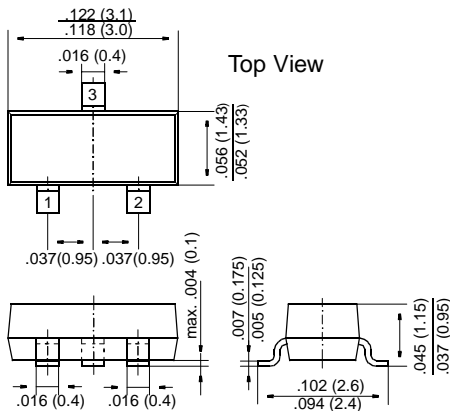


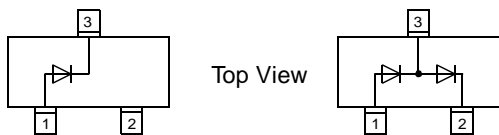
# BAS40 THRU BAS40-06

## Schottky Diodes

### SOT-23



Dimensions in inches and (millimeters)



**BAS40**  
Marking: 43

**BAS40-04**  
Marking: 44



**BAS40-05**  
Marking: 45

**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. 0.008 g

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS FOR ONE DIODE

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Forward Continuous Current at $T_{amb} = 25\text{ °C}$	$I_F$	200 <sup>1)</sup>	mA
Surge Forward Current at $t_p < 1\text{ s}$ , $T_{amb} = 25\text{ °C}$	$I_{FSM}$	600 <sup>1)</sup>	mA
Power Dissipation <sup>1)</sup> at $T_{amb} = 25\text{ °C}$	$P_{tot}$	200 <sup>1)</sup>	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_S$	-55 to +150	°C

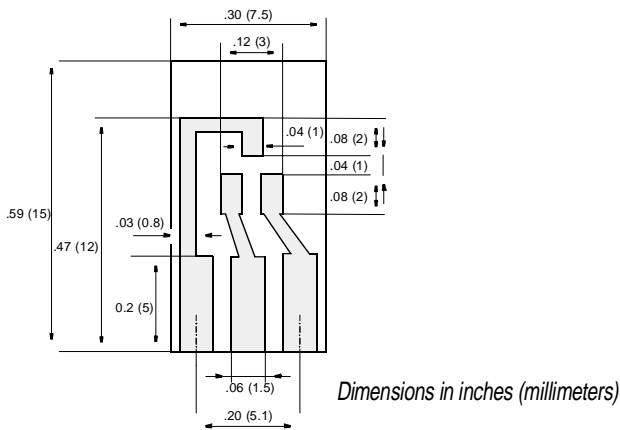
<sup>1)</sup> Device on fiberglass substrate, see layout

# BAS40 THRU BAS40-06

## ELECTRICAL CHARACTERISTICS

Ratings for one diode at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage Tested with 10 $\mu$ A Pulses	$V_{(BR)R}$	40	–	–	V
Leakage Current Pulse Test $t_p < 300 \mu s$ at $V_R = 30 V$	$I_R$	–	20	100	nA
Forward Voltage Pulse Test $t_p < 300 \mu s$ at $I_F = 1 mA$ at $I_F = 40 mA$	$V_F$ $V_F$	– –	– –	380 1000	mV mV
Capacitance at $V_R = 0 V, f = 1 MHz$	$C_{tot}$	–	4.0	5	pF
Reverse Recovery Time from $I_F = 10 mA$ through $I_R = 10 mA$ to $I_R = 1 mA$	$t_{rr}$	–	–	5	ns
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	–	–	430 <sup>1)</sup>	K/W
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)