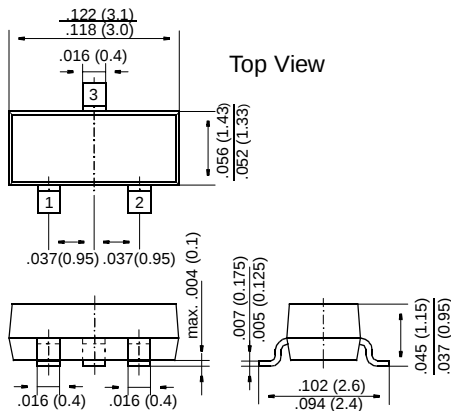


BAS40 THRU BAS40-06

Schottky Diodes

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.

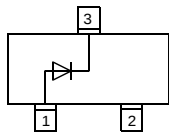


MECHANICAL DATA

Case: SOT-23 Plastic Package

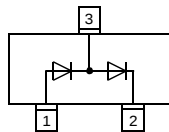
Weight: approx. 0.008 g

Dimensions in inches and (millimeters)

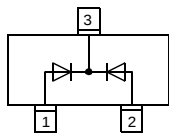


Top View

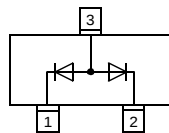
BAS40
Marking: 43



BAS40-04
Marking: 44



BAS40-05
Marking: 45



BAS40-06
Marking: 46

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS FOR ONE DIODE

Ratings at 25 °C ambient temperature unless otherwise specified

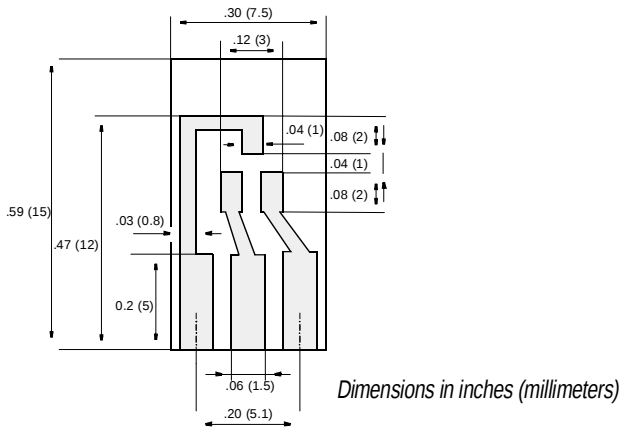
	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Forward Continuous Current at $T_{amb} = 25\text{ }^{\circ}\text{C}$	I_F	200 ¹⁾	mA
Surge Forward Current at $t_p < 1\text{ s}$, $T_{amb} = 25\text{ }^{\circ}\text{C}$	I_{FSM}	600 ¹⁾	mA
Power Dissipation ¹⁾ at $T_{amb} = 25\text{ }^{\circ}\text{C}$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