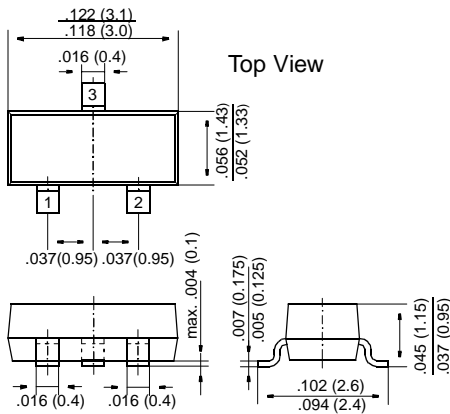


BAS16

Small Signal Diodes

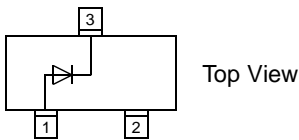
SOT-23



Dimensions in inches and (millimeters)

Marking

A6



FEATURES

- ◆ Silicon Epitaxial Planar Diode
- ◆ Fast switching diode in case SOT-23, especially suited for automatic insertion.



MECHANICAL DATA

Case: SOT-23 Plastic Package

Weight: approx. 0.008 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Forward Current (continuous)	I_F	250	mA
Non-Repetitive Peak Forward Current at $t = 1 \mu s$	I_{FSM}	2	A
at $t = 1 ms$	I_{FSM}	1	A
at $t = 1 s$	I_{FSM}	0.5	A
Power Dissipation at $T_{amb} = 25 \text{ }^\circ\text{C}$	P_{tot}	350 ¹⁾	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-65 to +150 ¹⁾	$^\circ\text{C}$

¹⁾ Device on fiberglass substrate, see layout (SOT-23).

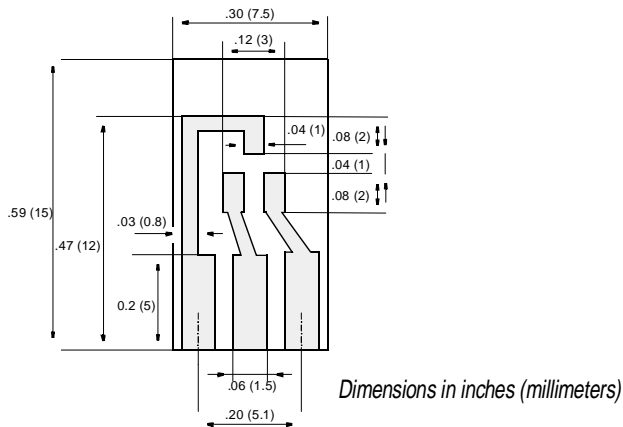
BAS16

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 1 \text{ mA}$	V_F	–	–	715	mV
at $I_F = 10 \text{ mA}$	V_F	–	–	855	mV
at $I_F = 50 \text{ mA}$	V_F	–	–	1000	mV
at $I_F = 150 \text{ mA}$	V_F	–	–	1250	mV
Leakage Current at $V_R = 25 \text{ V}$, $T_j = 150 \text{ °C}$	I_R	–	–	30	μA
at $V_R = 75 \text{ V}$	I_R	–	–	1	μA
at $V_R = 75 \text{ V}$, $T_j = 150 \text{ °C}$	I_R	–	–	50	μA
Capacitance at $V_R = 0$; $f = 1 \text{ MHz}$	C_{tot}	–	–	2	pF
Reverse Recovery Time from $I_F = 10 \text{ mA}$ to $I_R = 10 \text{ mA}$ $I_R = 1 \text{ mA}$, $R_L = 100 \Omega$	t_{rr}	–	–	6	ns
Thermal Resistance Junction to Ambient Air	BAS16 R_{thJA}	–	–	430 ¹⁾	K/W K/W

¹⁾ Device on fiberglass substrate, see layout (SOT-23).



Layout for R_{thJA} test

Thickness: Fiberglass 0.059 in (1.5 mm)

Copper leads 0.012 in (0.3 mm)