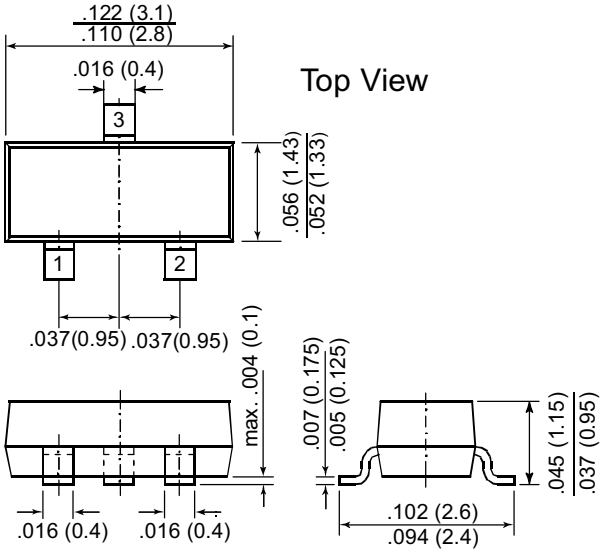
GENERAL SEMICONDUCTOR®

BAS16

Small Signal Diodes

SOT-23



Dimensions in inches and (millimeters)

Features

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

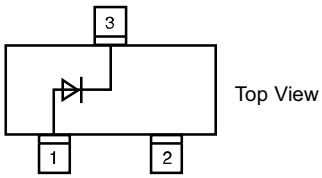
Mechanical Data

Case: SOT-23 Plastic Package

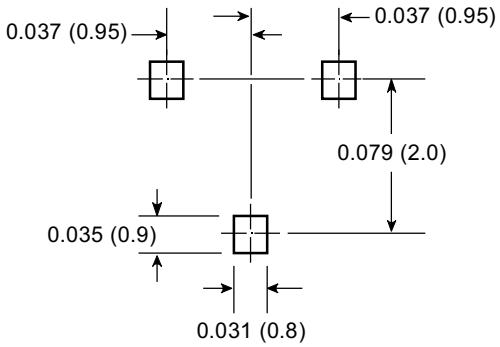
Weight: approx. 0.008 grams

Marking

A6



Mounting Pad Layout
SOT-23



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

Parameter	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 μs	I_{FSM}	2.0	A
at t = 1 ms	I_{FSM}	1.0	A
at t = 1 s	I_{FSM}	0.5	A
Power Dissipation at T_{amb} = 25°C	P_{tot}	350[1)]	mW
Thermal Resistance Junction to Ambiant Air	R_{thJA}	430[1)]	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-65 to +150	°C

Note:

(1) Device on Fiberglass Substrate, see layout on second page

BAS16

Small Signal Diodes

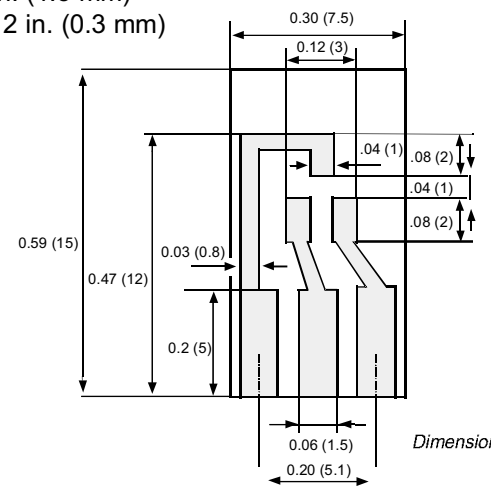
Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	at I_F = 1 mA	—	—	715	mV
		at I_F = 10 mA	—	—	855	mV
		at I_F = 50 mA	—	—	1000	mV
		at I_F = 150 mA	—	—	1250	mV
Leakage Current	I_R	V_R = 25V, T_j = 150 °C	—	—	30	µA
		V_R = 75V	—	—	1	µA
		V_R = 75V, T_j = 150 °C	—	—	50	µA
Capacitance	C_{tot}	V_R = 0 f = 1 MHz	—	—	2	pF
Reverse Recovery Time	t_{rr}	I_F = 10 mA, I_R = 10 mA I_{rr} = 1 mA, R_L = 100 Ω	—	—	6	ns

(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)



Dimensions in inches (millimeters)