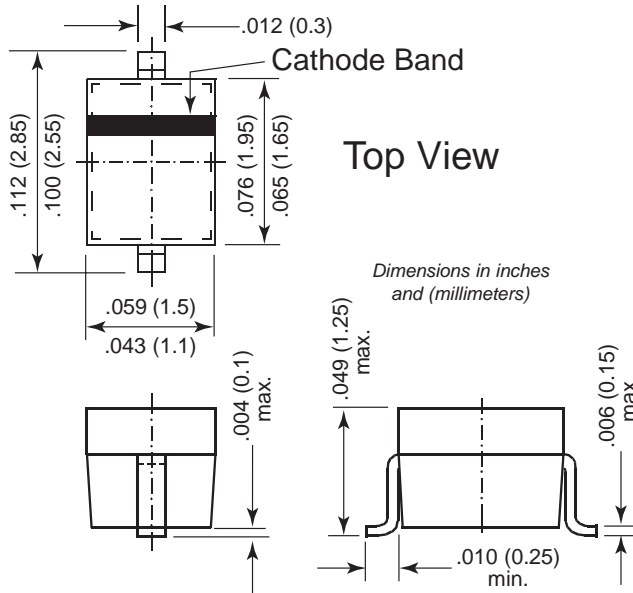


High-Voltage Small-Signal Switching Diode


SOD-323


Mechanical Data

Case: SOD-323 Plastic Package

Weight: approx. 0.004g

Marking Code: B6

Packaging Codes/Options:

D5/10K per 13" reel (8mm tape), 30K/box

D6/3K per 7" reel (8mm tape), 30K/box

Features

- Silicon Epitaxial Planar Diode
- Fast switching diode, especially suited for applications requiring high voltage capability

Maximum Ratings and Thermal Characteristics

 $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	240	V
Peak Repetitive Reverse Voltage	V_{RRM}	300	V
Peak Repetitive Reverse Current	I_{RRM}	200	mA
Forward Current (continuous)	I_F	225	mA
Peak Repetitive Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Current at $t_p = 1\mu\text{s}$ at $t_p = 1\text{s}$	I_{FSM}	4.0 1.0	A
Power Dissipation	P_{tot}	200 ⁽¹⁾	mW
Typical Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	650 ⁽¹⁾	$^\circ\text{C/W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +150	$^\circ\text{C}$

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

Electrical Characteristics

 $T_J = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V_{BR}	$I_R = 100\mu\text{A}$	300	—	—	V
Leakage Current	I_R	$V_R = 240\text{V}$ $V_R = 240\text{V}, T_J = 150^\circ\text{C}$	— —	— —	100 100	nA μA
Forward Voltage	V_F	$I_F = 20\text{mA}$ $I_F = 100\text{mA}$	— —	0.83 —	0.87 1.00	V
Capacitance	C_{tot}	$V_F = V_R = 0$ $f = 1\text{MHz}$	—	—	5.0	pF
Reverse Recovery Time	t_{rr}	$I_F = I_A = 30\text{mA}$ $I_{rr} = 3.0\text{mA}, R_L = 100\Omega$	—	—	50	ns

Note:

(1)Device on fiberglass substrate, see layout