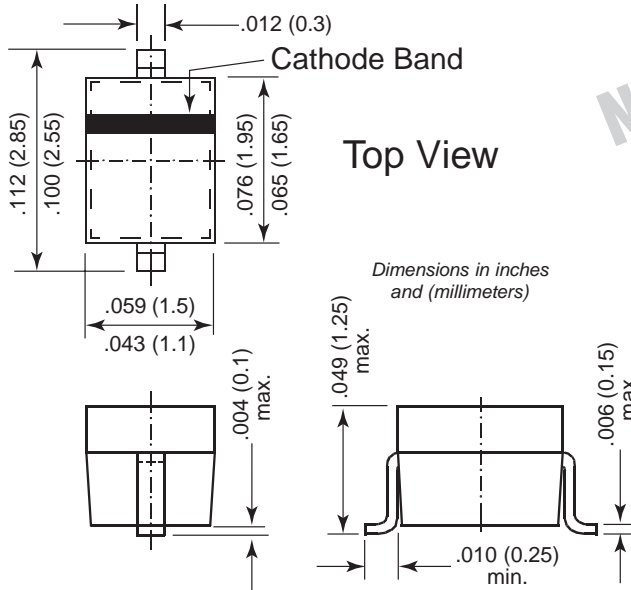


High-Voltage Small-Signal Switching Diode



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

TA = 25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	V _R	240	V
Peak Repetitive Reverse Voltage	V _R RM	300	V
Peak Repetitive Reverse Current	I _R RM	200	mA
Forward Current (continuous)	I _F	225	mA
Peak Repetitive Forward Current	I _F RM	625	mA
Non-Repetitive Peak Forward Current at tp = 1µs at tp = 1s	I _F SM	4.0 1.0	A
Power Dissipation	P _{tot}	200 ⁽¹⁾	mW
Typical Thermal Resistance Junction to Ambient Air	R _{θJA}	650 ⁽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

High-Voltage Small-Signal Switching Diode

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