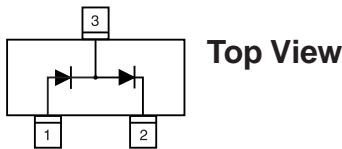
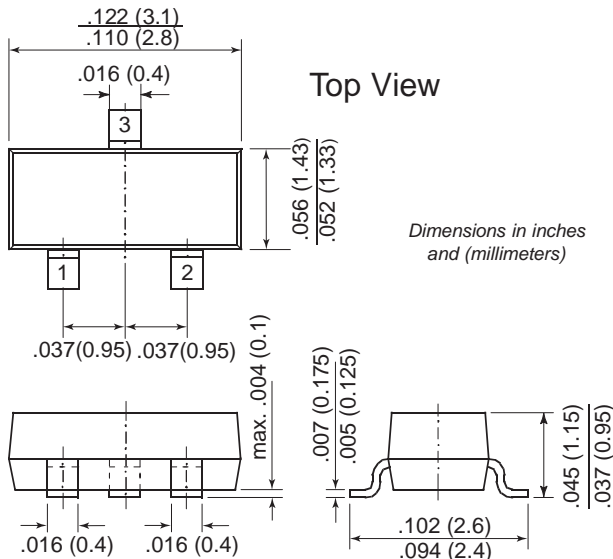
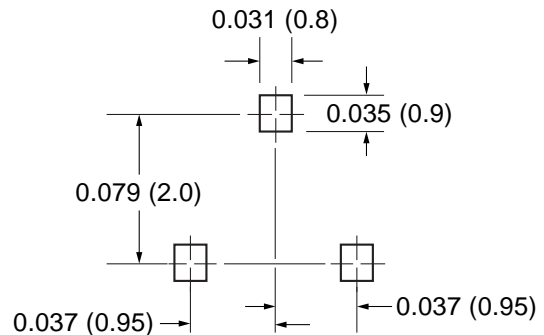




Dual In-Series General-Purpose Controlled-Avalanche Diode

TO-236AB (SOT-23)

Mounting Pad Layout


Features

- Silicon Epitaxial Planar Diode
- For general purpose switching applications

Mechanical Data

Case: SOT-23 (TO-236AB) Plastic Package

Weight: approx. 0.008g

Marking Code: L21

Packaging Codes/Options:

E8/10K per 13" reel (8mm tape), 30K/box

E9/3K per 7" reel (8mm tape), 30K/box

Maximum Ratings and Thermal Characteristics

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

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	90	V
Peak Repetitive Reverse Voltage	V_{RRM}	110	V
Peak Repetitive Reverse Current	I_{RRM}	600	mA
Forward Current (continuous)	I_F	250 ⁽¹⁾ 150 ⁽¹⁾	mA
Peak Repetitive Forward Current	I_{RFM}	600	mA
Non-Repetitive Peak Forward Current ⁽²⁾	I_{FSM}	10 4.0 0.75	A
Power Dissipation	P_{tot}	250 ⁽¹⁾	mW
Peak Repetitive Reverse Energy at $t_p = 50\mu\text{s}$, $f \leq 20\text{Hz}$, $T_J = 25^\circ\text{C}$	E_{RRM}	5	mJ
Typical Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500 ⁽¹⁾	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +150	$^\circ\text{C}$

Notes:

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

(2) Square wave with $T_J = 25^\circ\text{C}$ prior to surge

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

Parameter	Symbol	Test Condition	Min	Max	Unit
Forward Voltage	V _F	I _F = 10mA	—	750	mV
		I _F = 50mA	—	840	mV
		I _F = 100mA	—	900	mV
		I _F = 200mA	—	1.00	V
		I _F = 400mA	—	1.25	V
Reverse Current	I _R	V _R = 90V	—	100	nA
		V _R = 90V, T _J = 150°C	—	100	μA
Reverse Avalanche Breakdown Voltage	V _{(BR)R}	I _R = 1mA	120	170	V
Diode Capacitance	C _d	f = 1MHz V _R = 0	—	35	pF
Reverse Recovery Time	t _{rr}	I _F = I _A = 30mA I _R = 30mA, R _L = 100Ω, I _{rr} = 3mA	—	50	ns

Layout for R_{θJA} test

Thickness: Fiberglass 0.059 in. (1.5 mm)
Copper leads 0.012 in. (0.3 mm)

