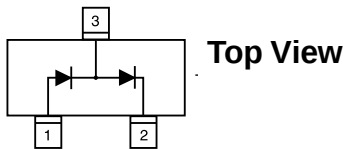
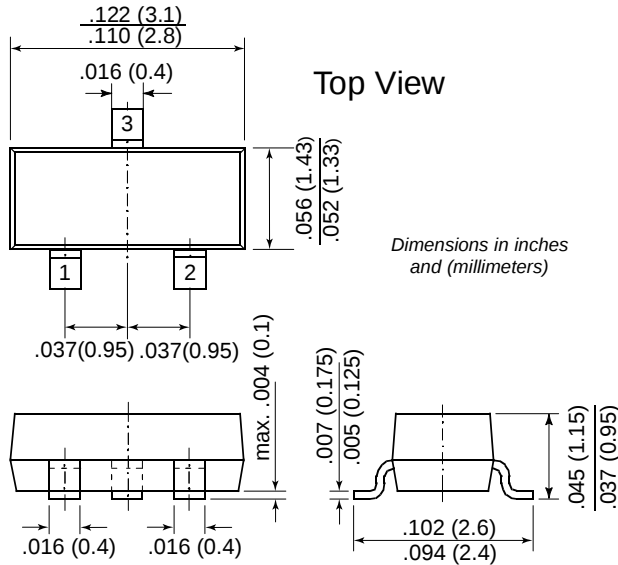


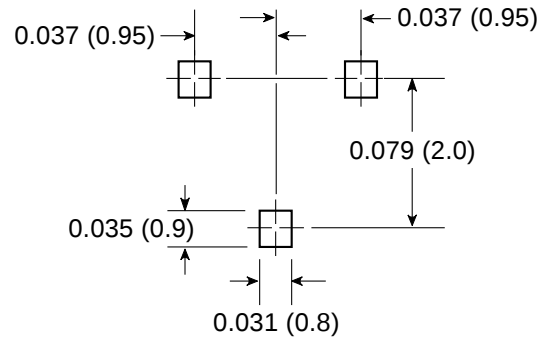


Dual In-Series Small-Signal Switching Diode

TO-236AB (SOT-23)



Mounting Pad Layout



Features

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

Mechanical Data

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

Weight: approx. 0.008g

Marking Code: DB6

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	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_{RFM}	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}	350 ⁽¹⁾	mW
Typical Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	357 ⁽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

Dual In-Series Small-Signal Switching Diode

Electrical Characteristics

$T_1 = 25^\circ\text{C}$ unless otherwise noted

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

(1) Device on fiberglass substrate, see layout

Layout for R_ΘJA test

Thickness: Fiberglass 0.059 in. (1.5 mm)

Copper leads 0.012 in. (0.3 mm)

