

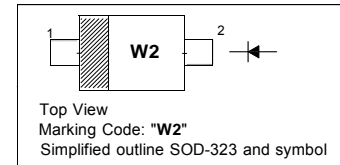
Silicon Epitaxial Planar Switching Diode

Applications

- High-speed switching

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	100	V
Continuous Forward Current	I_F	250	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Current	I_{FSM}	4	A
		1	
		0.5	
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 150\text{ mA}$	V_F	0.715	V
		0.855	
		1	
		1.25	
Reverse Current at $V_R = 25\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 25\text{ V}, T_J = 150\text{ }^\circ\text{C}$ at $V_R = 75\text{ V}, T_J = 150\text{ }^\circ\text{C}$	I_R	30	nA
		1	μA
		30	μA
		50	μA
Diode Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$	C_{tot}	1.5	pF
Reverse Recovery Time at $I_F = I_R = 10\text{ mA}, I_{tr} = 0.1 \times I_R, R_L = 100\ \Omega$	t_{rr}	4	ns

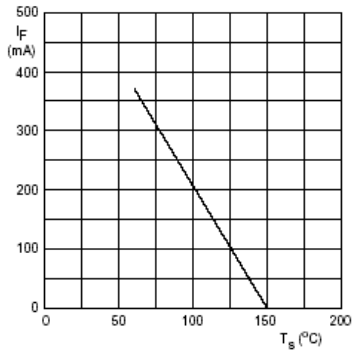
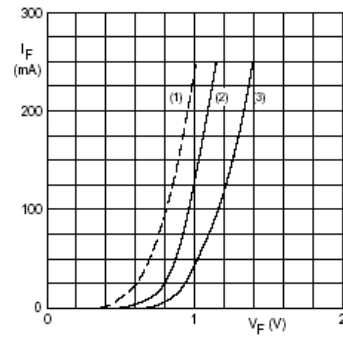
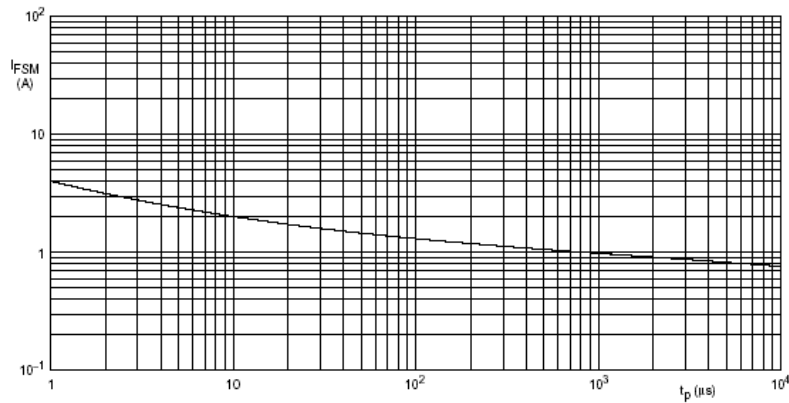


Fig. 1 Maximum permissible continuous forward current as a function of soldering point temperature.



(1) $T_J = 150^\circ\text{C}$; typical values.
(2) $T_J = 25^\circ\text{C}$; typical values.
(3) $T_J = 25^\circ\text{C}$; maximum values.

Fig. 2 Forward current as a function of forward voltage.



Based on square wave currents.
 $T_J = 25^\circ\text{C}$ prior to surge.

Fig. 3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

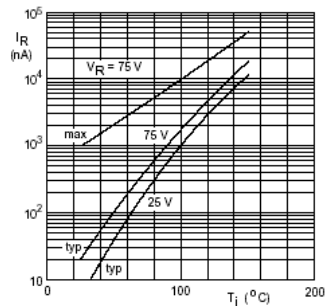
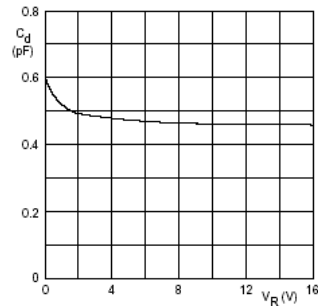


Fig. 4 Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$; $T_J = 25^\circ\text{C}$.

Fig. 5 Diode capacitance as a function of reverse voltage; typical values.



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SOD-323

BAS316WS

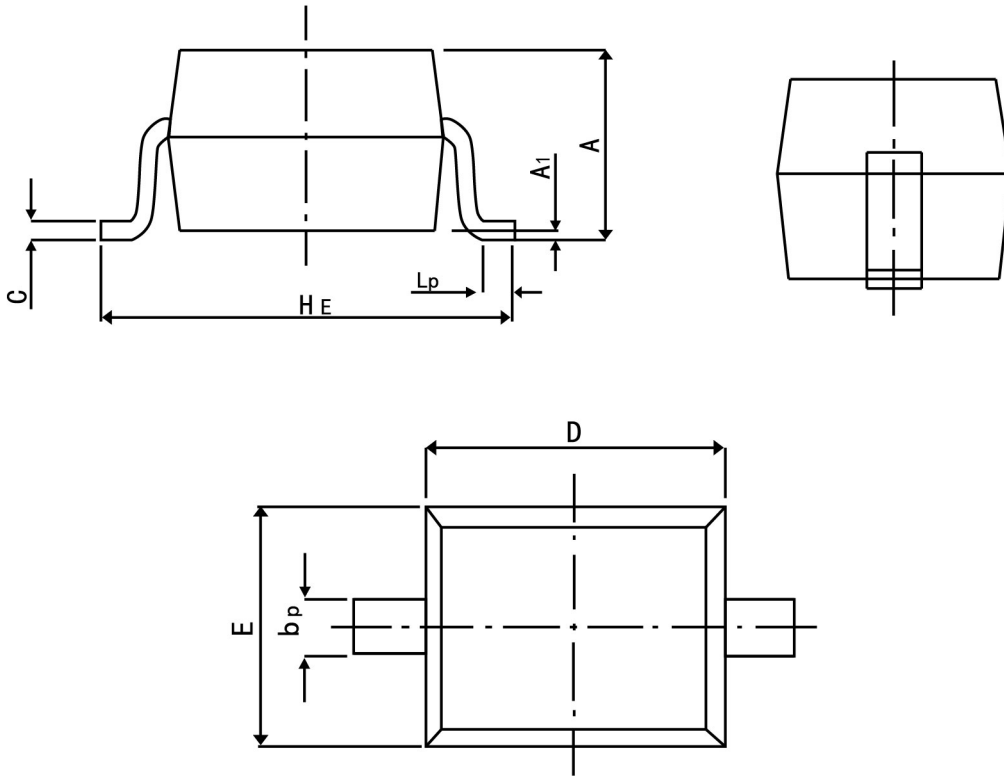


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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.20
bp	0.25	0.40
C	0.10	0.15
D	1.60	1.80
E	1.15	1.35
HE	2.30	2.80
A1	0.01	0.10
Lp	0.20	0.50