

SOD-323 Plastic-Encapsulate Diodes

1N3004WS Silicon Epitaxial Planar Diode

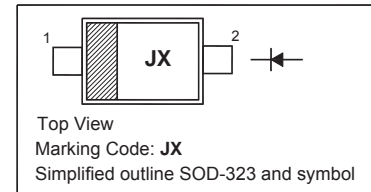
High Voltage Switching Diode

Features

- Fast switching speed
- High Conductance
- High Reverse Breakdown Voltage

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



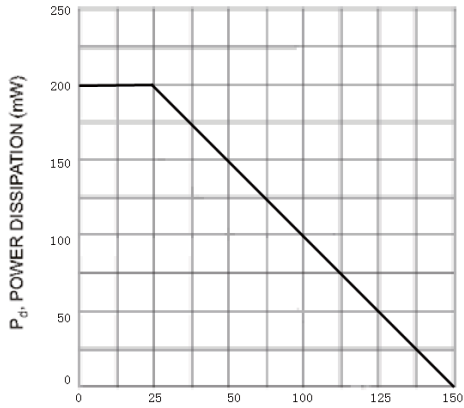
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	350	V
Working Peak Reverse Voltage	V_{RWM}	300	V
Reverse Voltage	V_R	300	V
Continuous Forward Current	I_F	225	mA
Peak Repetitive Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4	A
		1	
Power Dissipation	P_d	200	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	$^\circ\text{C}$

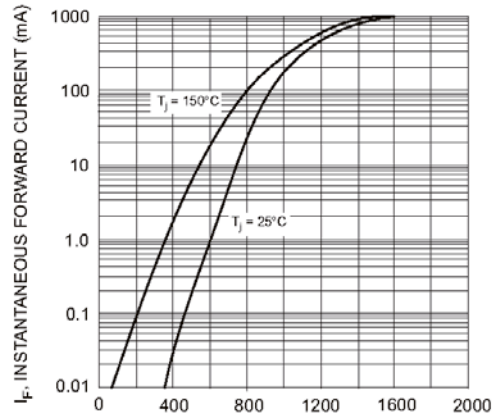
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 20\text{ mA}$ at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	V_F	- - -	0.87 1 1.25	V
Reverse Current at $V_R = 240\text{ V}$ at $V_R = 240\text{ V}, T_j = 150\text{ }^\circ\text{C}$	I_R	- -	100 100	nA μA
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	300	-	V
Total Capacitance at $V_R = 0, f = 1\text{ MHz}$	C_T	-	5	pF
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}, i_{tr} = 0.1 I_R, R_L = 100\text{ }\Omega$	t_{rr}	-	50	ns

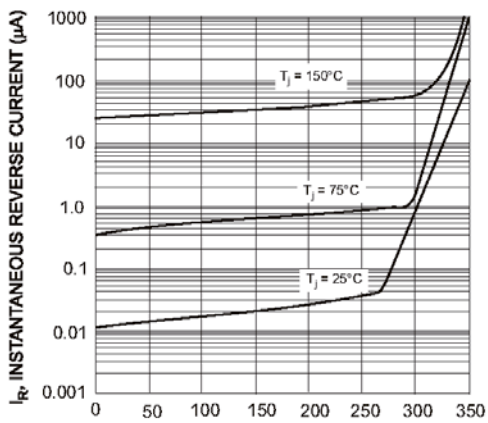
Typical Characteristics



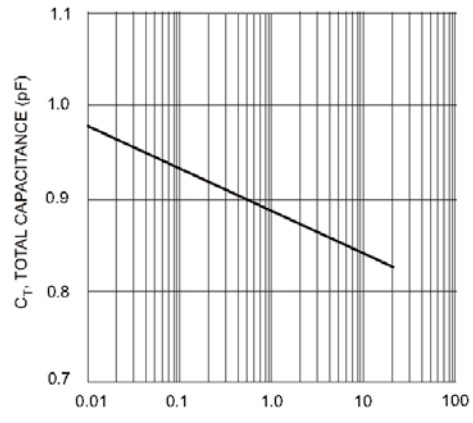
T_A , AMBIENT TEMPERATURE, (°C)
Fig. 1 Power Derating Curve, total package



V_F , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics, per element



V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics, per element

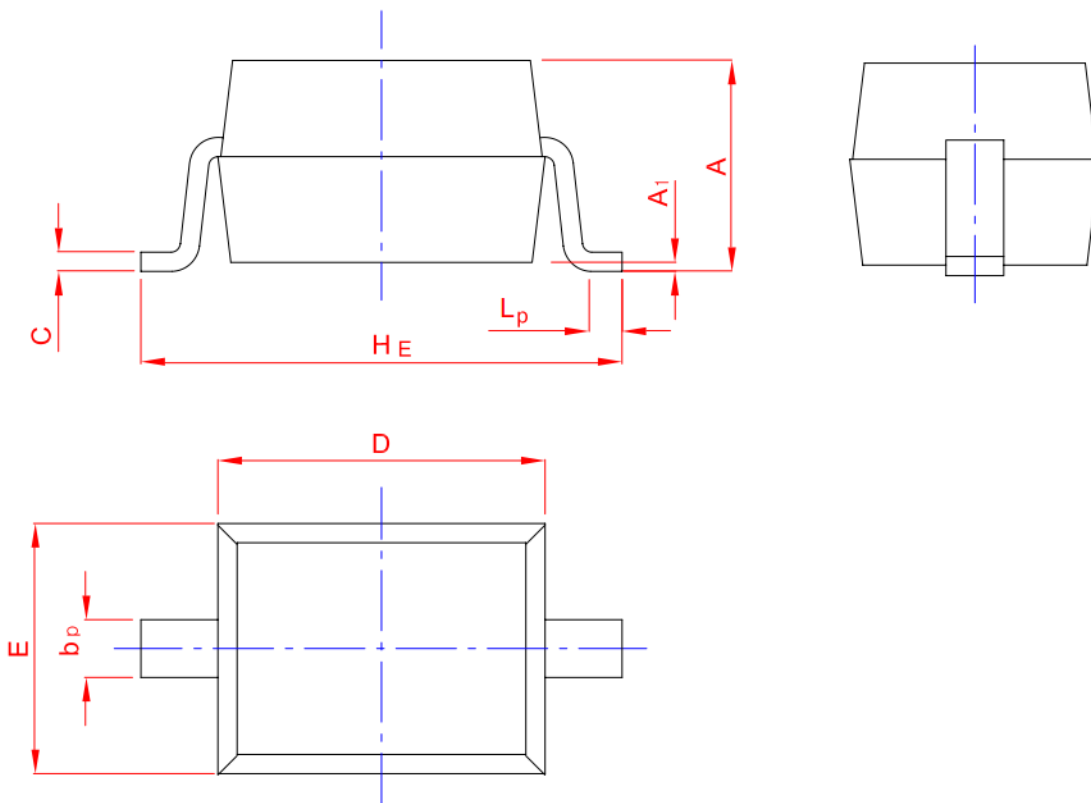
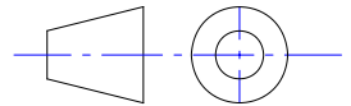


V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20 0.80	0.40 0.25	0.18 0.08	1.80 1.60	1.40 1.15	2.80 2.30	0.10 0.00	0.50 0.10

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