TECH PUBLIC
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1N3004WS

HIGH VOLTAGE SWITCHING DIODE

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Features

- Repetitive peak forward current
- High switching speed
- Continuous reverse voltage
- Repetitive peak reverse voltage

SOD-323

Applications

- High-speed switching
- General-purpose switching
- Polarity protection application
- Freewheeling diodes

Absolute Maximum Ratings(TA=25°C unless otherwise specified)

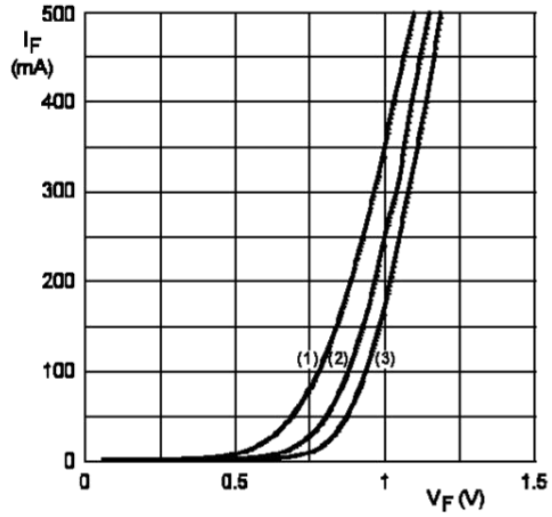
Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	VRM	300	V
Peak Repetitive Peak Reverse Voltage	VRRM	300	V
Power Dissipation	PD	200	mW
Average Forward Curent	IF	225	mA
Peak Forward Surge Current @t-8.3ms	IFSM	625	mA
Operating Junction and Storage Temperature Range	TJ, TSTG	-55~+150	°C
Thermal Resistance from Junction to Ambient	RθJA	667	°C/W

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF = 1mA	--	0.6	--	V
		IF = 10mA	--	0.7	--	V
		IF = 50mA	--	0.8	--	V
		IF = 100mA	--	--	1.1	V
Maximum Peak Reverse Current	IR	VR = 250V	--	--	150	nA
		VR = 100V	--	50	--	nA
Reverse Breakdown Voltage	VBR	IR= 100μA	300	--	--	V
Total Capacitance	CJ	VR = 0V, f = 1.0MHz	--	--	5	pF
Reverse Recovery Time	trr	IF = IR = 30mA,Irr = 1mA, RL = 100Ω	--	--	50	ns

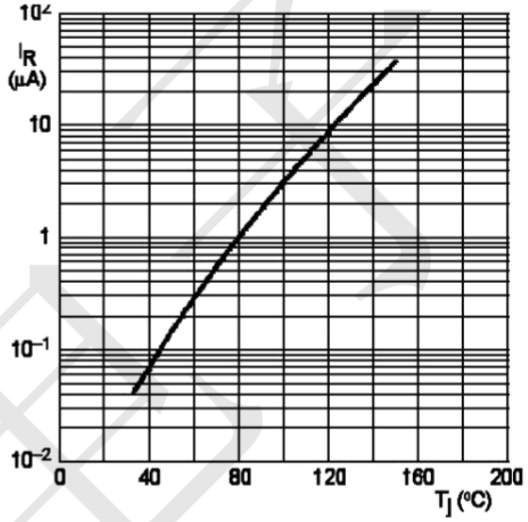
Note 1: The data tested by surface mounted on a 18mm * 15mm * 1mm FR4-epoxy P.C.B

Typical Electrical Characteristic Curves



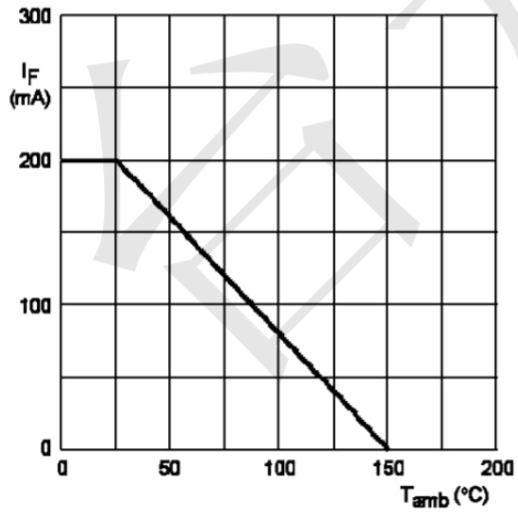
(1) T_{amb} = 150 °C.
(2) T_{amb} = 75 °C.
(3) T_{amb} = 25 °C.

Forward current as a function of forward voltage; typical values.

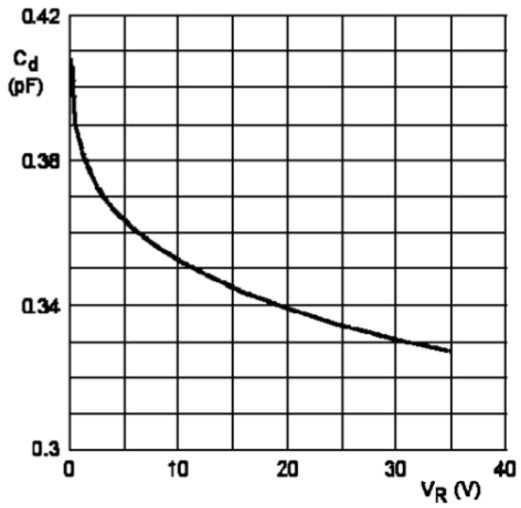


$V_R = V_{Rmax}$; typical values.

Reverse current as a function of junction temperature.



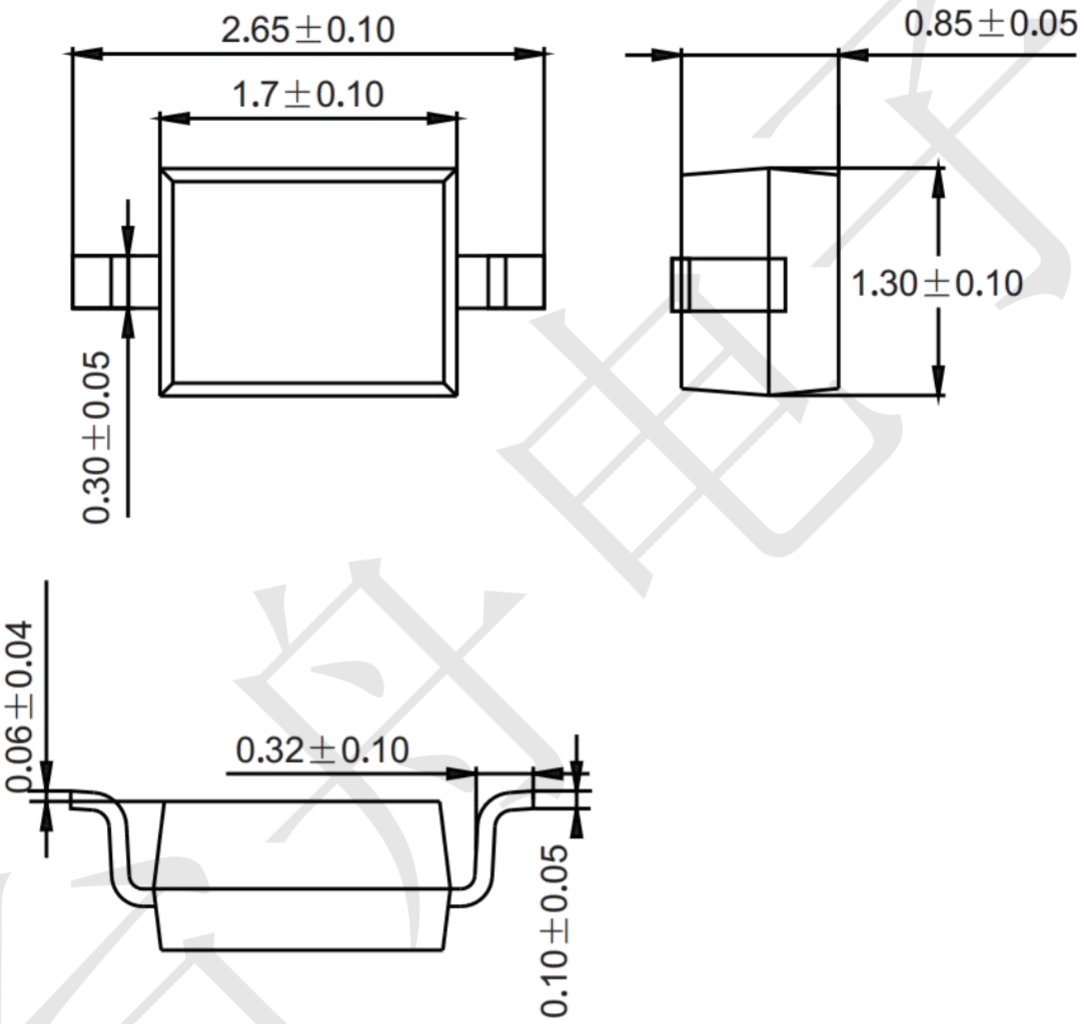
Maximum permissible continuous forward current as a function of ambient temperature.



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

Package Outline Dimensions (unit: mm)

SOD-323



Mounting Pad Layout (unit: mm)