

## FEATURES

Fast Switching Speed  
Surface Mount Package Ideally Suited for Automatic Insertion  
For General Purpose Switching Applications  
High Conductance

VOLTAGE RANGE

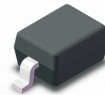
100Volts

CURRENT

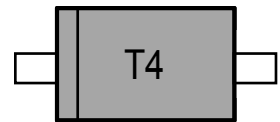
0.15 Ampere

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Lead: Axial leads, solderable per MIL-STD-750, method 2026
- \* Polarity: Polarity symbols marked on case
- \* Marking: T4



SOD-323



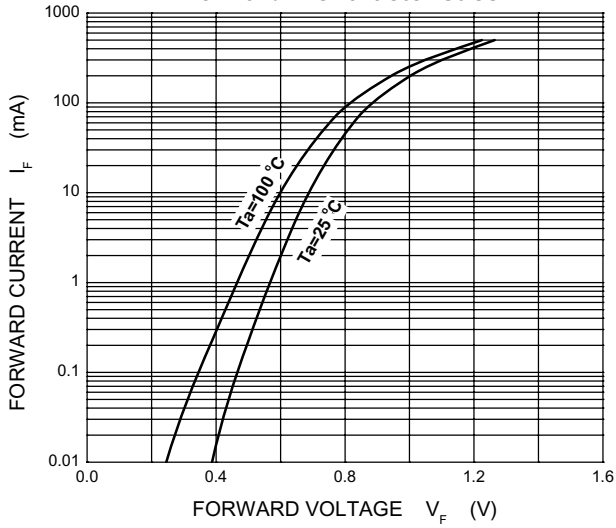
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

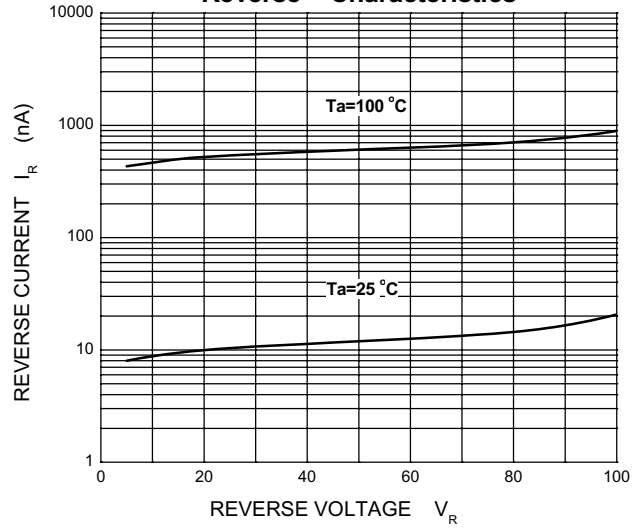
TYPE NUMBER	1N4148WS	UNITS
Maximum Recurrent Peak Reverse Voltage	100	V
Maximum RMS Voltage	70	V
Maximum DC Blocking Voltage	100	V
Maximum Average Forward Rectified Current		
See Fig. 1	0.15	A
Peak Forward Surge Current		
@ t=1.0 μs	4.0	A
@ t=1.0s	1.0	A
Maximum Instantaneous Forward Voltage		
at 0.01A	0.85	
at 0.05A	1.0	
at 0.15A	1.25	V
Maximum DC Reverse Current		
at 75V	1	μA
Ta=25°C		
Typical Junction Capacitance (VR=0V f=1MHz)	1.15	pF
Total Power Dissipation	250	mW
Maximum Reverse Recovery Time (TRR typical)	4	ns
Operating Temperature Range Tj	-55 to +150	°C
Storage Temperature Range Tstg	-55 to +150	°C

RATING AND CHARACTERISTIC CURVES

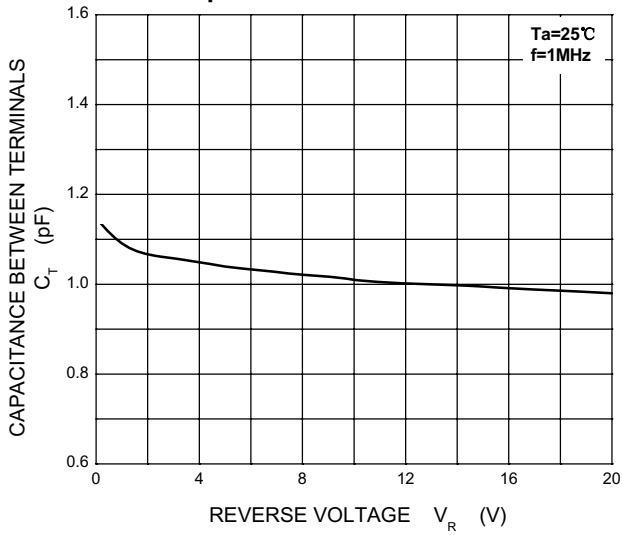
**Forward Characteristics**



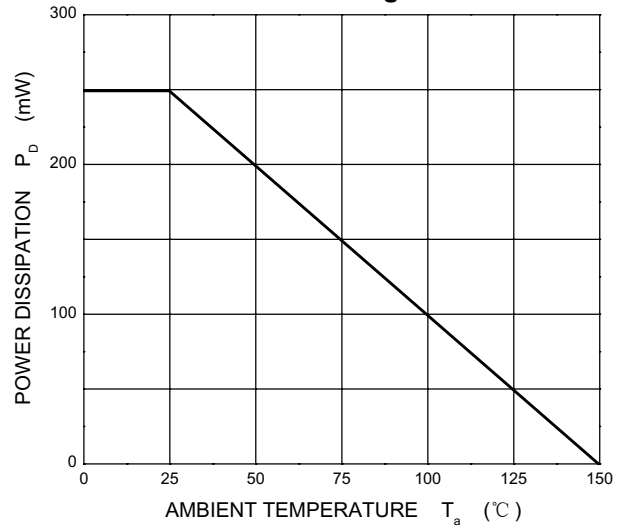
**Reverse Characteristics**



**Capacitance Characteristics**



**Power Derating Curve**



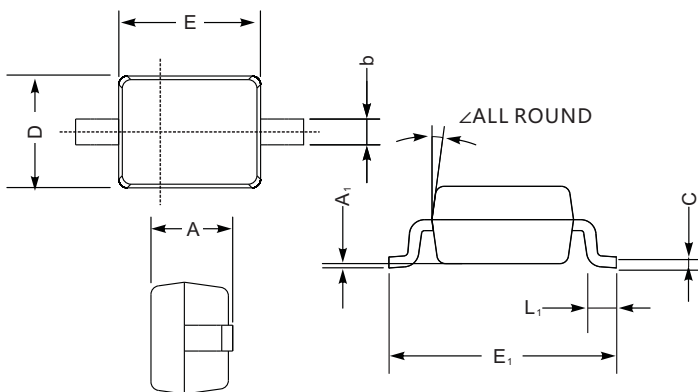
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150 °C
	-Temperature Max( $T_{s(max)}$ )	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3 °C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217 °C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp ( $T_p$ )		8 min. Max
Do not exceed		+260 °C



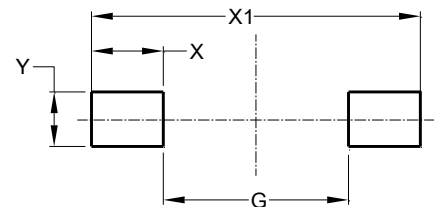
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

UNIT		A	C	D	E	$E_1$	b	$L_1$	$A_1$	$\angle$
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	9°
	min	32	3.1	47	63	100	9.8	7.9	—	



Dimensions	Value (in mm)
<b>G</b>	1.40
<b>X</b>	1.20
<b>X1</b>	3.80
<b>Y</b>	1.00

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	2.00±0.20
		D0	1.55±0.20
		D1	1.00±0.20
		E	1.55±0.25
		F	3.60±0.20
		W	8.00±0.20
		A0	2.00±0.20
		B0	3.25±0.20
		K0	1.35±0.20
		T	0.23±0.10
		D2	177.0±5.0
		D3	55Min.
		D4	R24.6±2.0
G	R82.0±2.0		
I	13.0±2.0		
W1	10.20±3.0		
Quantity: 3000PCS			

7" Reel

