

## FEATURES

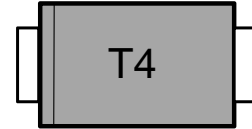
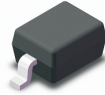
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

## 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

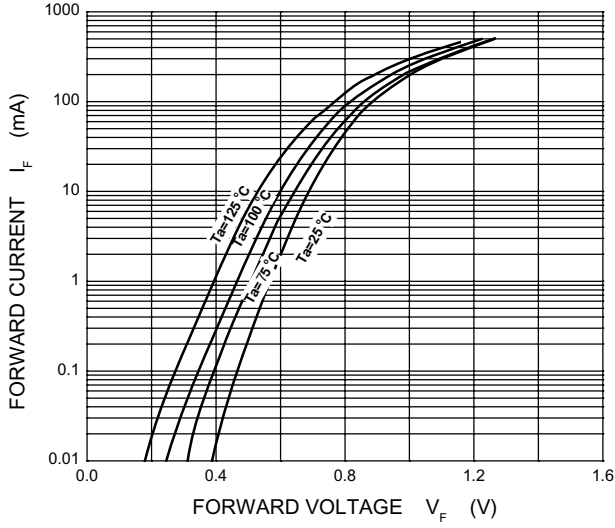
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

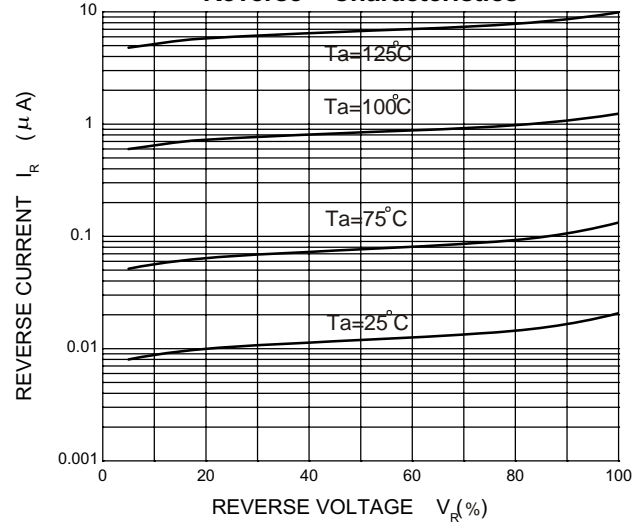
TYPE NUMBER		1N4148W	UNITS
Maximum Recurrent Peak Reverse Voltage		100	V
Maximum RMS Voltage		70	V
Maximum DC Blocking Voltage		100	V
Maximum Average Forward Rectified Current			
See Fig. 1		0.15	A
Peak Forward Surge Current	@ t=1.0 μs	4.0	
	@ t=1.0s	1.0	A
Maximum Instantaneous Forward Voltage	at 0.01A	0.85	
	at 0.05A	1.0	
	at 0.15A	1.25	V
Maximum DC Reverse Current	Ta=25°C	1	μA
at Rated DC Blocking Voltage			
Typical Thermal resistance	RθJA	355	°C/W
	RθJC	225	
Typical Junction Capacitance (VR=0V f=1MHz)		1.15	pF
Total Power Dissipation		410	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**

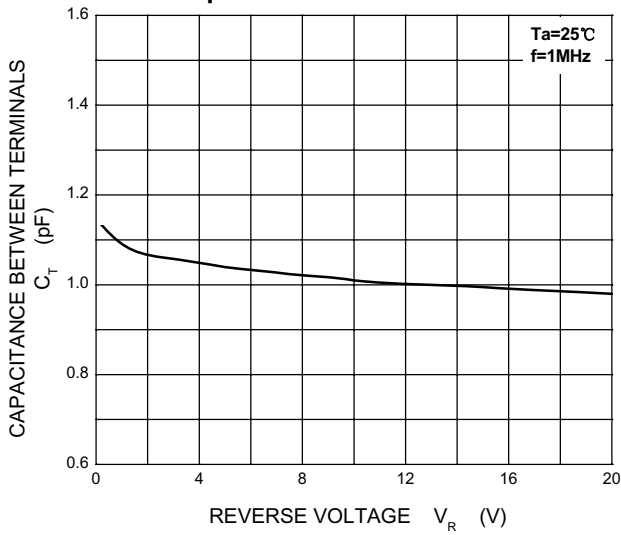
**Forward Characteristics**



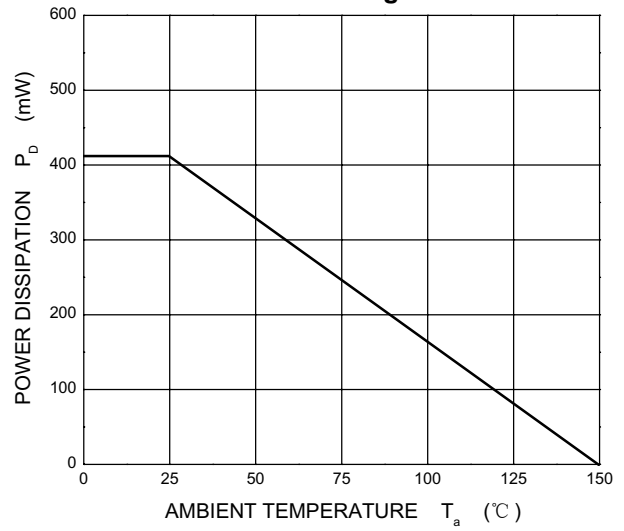
**Reverse Characteristics**



**Capacitance Characteristics**



**Power Derating Curve**



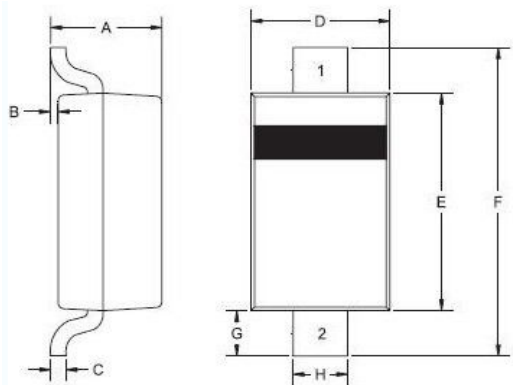
Soldering parameters

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

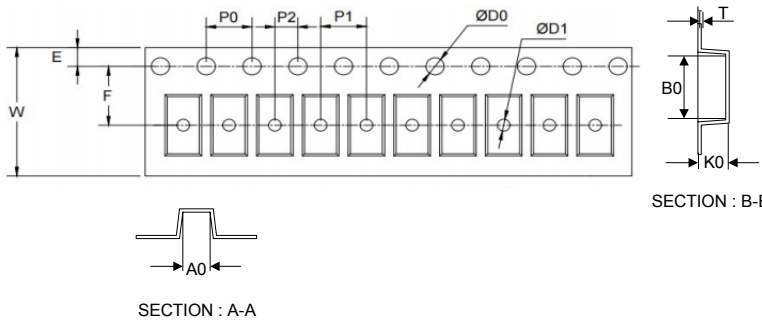
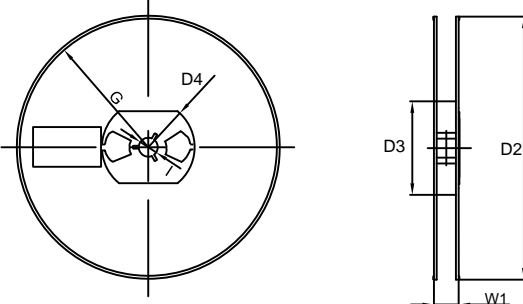
SOD123



SOD123		
Dim	Min	Max
A	0.95	1.35
B	0.00	0.12
C	-	0.20
D	1.40	1.80
E	2.50	2.80
F	3.60	3.90
G	0.40	-
H	0.50	0.70
All Dimensions in mm		

Dimensions	Value (in mm)
G	2.20
X	1.20
X1	4.60
Y	1.20

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±0.10	
	D1	1.00±0.20	
	E	1.75±0.20	
	F	3.60±0.20	
	W	8.00±0.40	
	A0	2.30±0.40	
	B0	4.00±0.40	
	K0	1.50±0.40	
	T	0.23±0.10	
	<p>7" Reel</p> 	D2	177.0±3.0
		D3	55Min.
		D4	R24.0±3.0
G		R82.0±3.0	
I		13.0±2.0	
W1		11.0±3.0	
Quantity: 3000PCS			