

## FAST SWITCHING DIODES

### Features

- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications
- ◆ High conductance

### Mechanical Data

Case: JEDEC SOD-323 molded plastic body

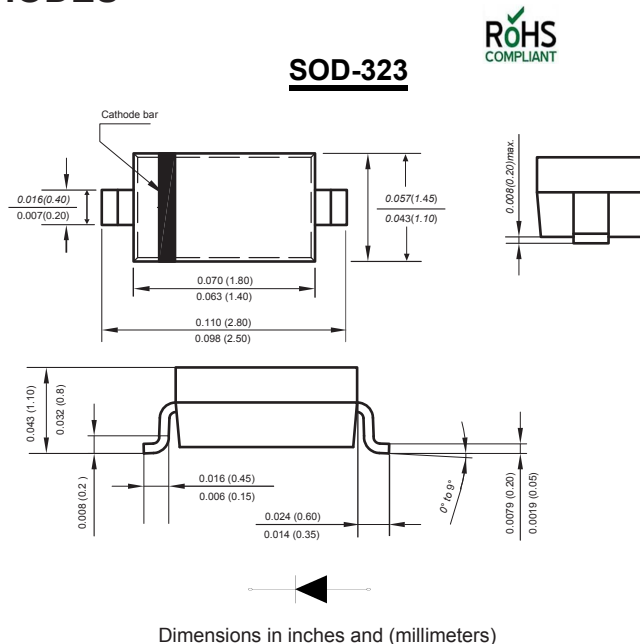
Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case

Weight : 0.0007 ounce, 0.02 grams

Marking: T4

### Absolute Maximum Ratings at 25 °C

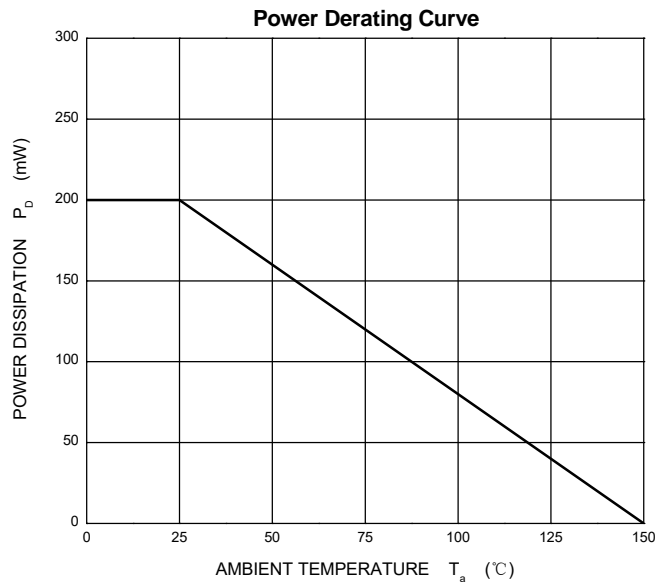
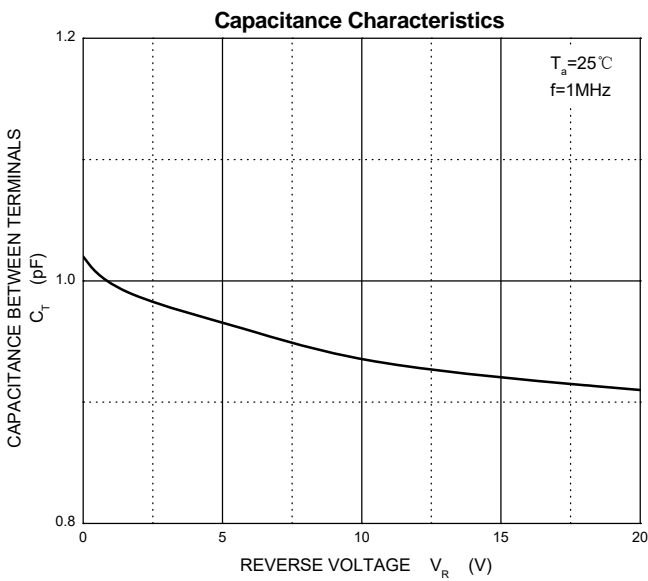
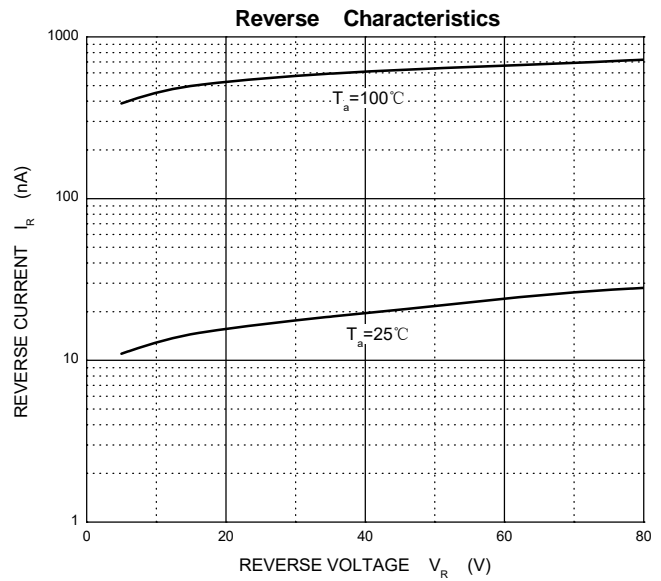
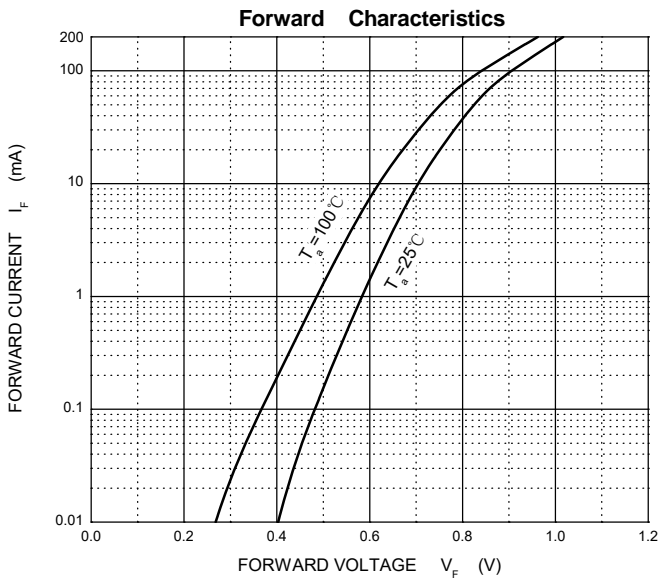


PARAMETER	SYMBOLS	1N4148WS-E	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum RMS voltage	$V_{RMS}$	75	
Reverse Breakdown voltage at $I_R=1 \mu A$	$V_{(BR)R}$	75	
Forward continuous current	$I_{FM}$	300	mA
Average rectified output current	$I_O$	150	mA
Peak forward current	$I_{FSM}$	0.5	A
at 1s		1	
at 1ms		4.0	
Power dissipation	$P_d$	400	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	250	°C/W
Junction temperature	$T_j$	-55 to +125	°C
Storage temperature	$T_{STG}$	-55 to +150	°C

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

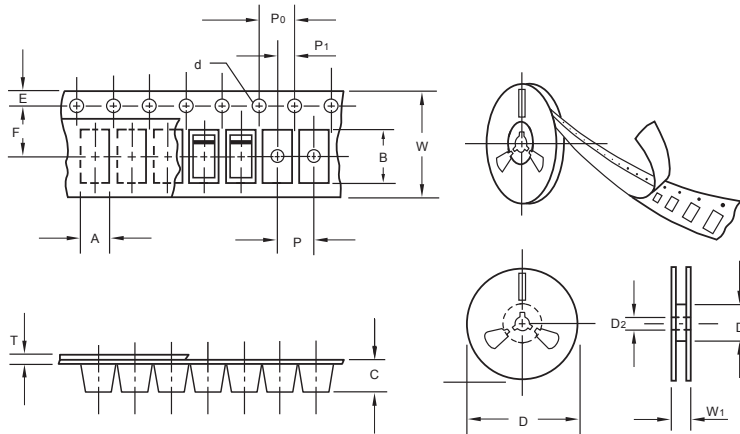
PARAMETER	SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	$V_{F1}$			0.715	V	$I_F=1.0\text{mA}$
	$V_{F2}$			0.855	V	$I_F=10\text{mA}$
	$V_{F3}$			1.0	V	$I_F=50\text{mA}$
	$V_{F4}$			1.25	V	$I_F=150\text{mA}$
Reverse current	$I_{R1}$			0.025	$\mu A$	at $V_R=20\text{V}$ $T_j=25\text{ }^\circ\text{C}$
	$I_{R2}$			1	$\mu A$	at $V_R=75\text{V}$ $T_j=25\text{ }^\circ\text{C}$
	$I_{R3}$			30	$\mu A$	at $V_R=25\text{V}$ $T_j=150\text{ }^\circ\text{C}$
	$I_{R4}$			50	$\mu A$	at $V_R=75\text{V}$ $T_j=150\text{ }^\circ\text{C}$
Capacitance between terminals	$C_T$			2	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse recovery time	$t_{rr}$			4	ns	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1X I_R, R_L=100 \Omega$

## Typical Characteristics



The curve above is for reference only.

## Packing information



unit:mm

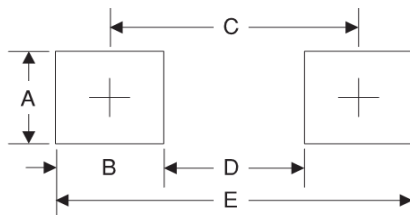
Item	Symbol	Tolerance	SOD-323
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	50.0
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W <sub>1</sub>	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-323	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	0.7	0.028
B	0.7	0.028
C	2.15	0.085
D	1.45	0.057
E	2.85	0.112

## Important Notice and Disclaimer

Microdiode Electronics (Shenzhen) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Microdiode Electronics (Shenzhen) makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Microdiode Electronics (Shenzhen) assume any liability for application assistance or customer product design. Microdiode Electronics (Shenzhen) does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights or Microdiode Electronics (Shenzhen).

Microdiode Electronics (Shenzhen) products are not authorized for use as critical components in life support devices or systems without express written approval of Microdiode Electronics (Shenzhen).