BORN SEMICONDUCTOR

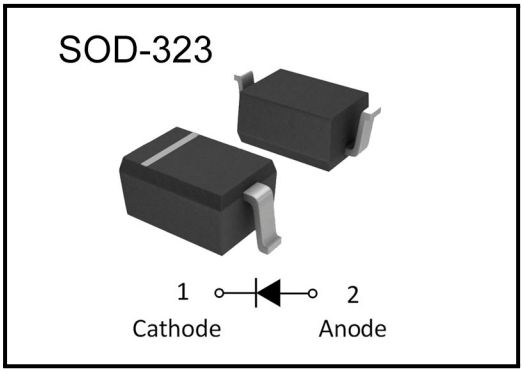
1N4148WS

Fast Switching Diode

Features

- Fast Switching Device (T_{RR} <4.0 nS)
- Power Dissipation of 200mW
- High Stability and High Reliability
- Low reverse leakage

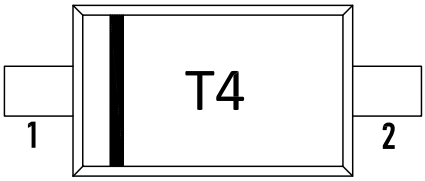
Package



Description

- SOD-323 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
1N4148WS	SOD-323	T4	3K	Tape and reel

Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_R	Reverse Voltage	75	V
V_{RM}	Peak Reverse Voltage	100	V
I_O	Average Rectified Current	150	mA
I_{FM}	Peak Forward Current	300	mA
I_{FSM}	Peak Forward Surge Current @t_p=1us; T_A=25°C	2.0	A
P_d	Power Dissipation	200	mW
T_J	Operating junction temperature	150	°C
T_S	Storage temperature range	-55 to +150	°C

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Revision: 2022-Jan-1-A

1N4148WS

Fast Switching Diode

Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Limits		Unit
			Min.	Max.	
B_V	Breakdown Voltage	I_R=100uA	100	–	V
		I_R=5uA	75	–	
I_R	Reverse Leakage Current	V_R=20V	–	25	nA
		V_R=75V	–	1	uA
V_F	Forward Voltage	I_F=1.0mA	–	0.715	V
		I_F=10mA	–	0.855	
		I_F=50mA	–	1.00	
		I_F=150mA	–	1.25	
T_{RR}	Reverse Recovery Time	I_F =I_R=10mA	–	4	nS
		R_L = 100Ω			
		I_{RR} = 0.1xI_R			
C_T	Capacitance	V_R = 0V, f=1MHZ	–	2	pF

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Fast Switching Diode

Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

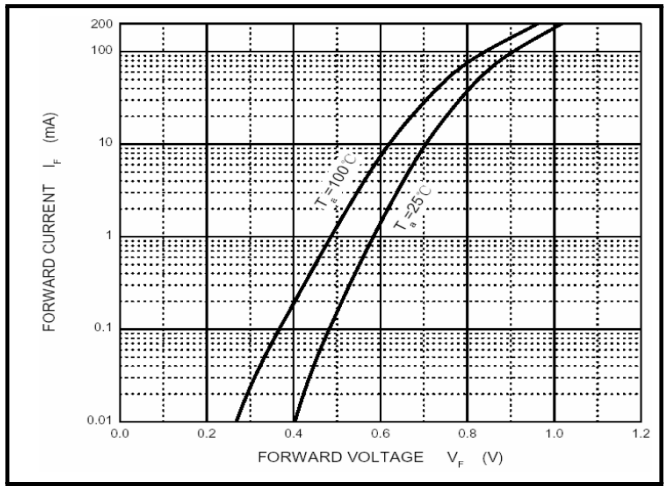


Figure 2: Reverse Characteristics

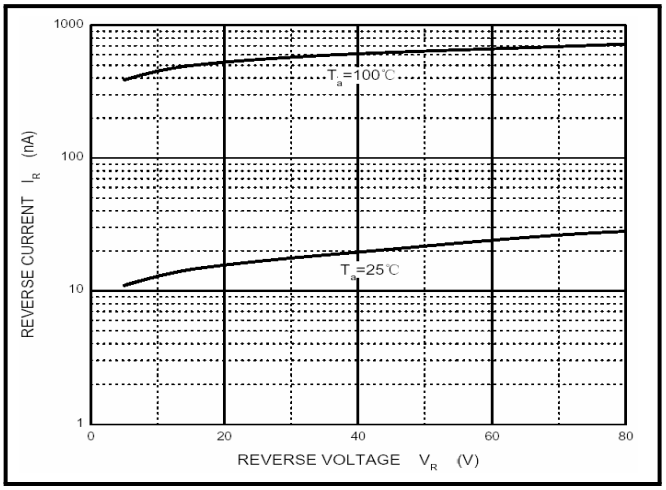


Figure 3: Capacitance Characteristics

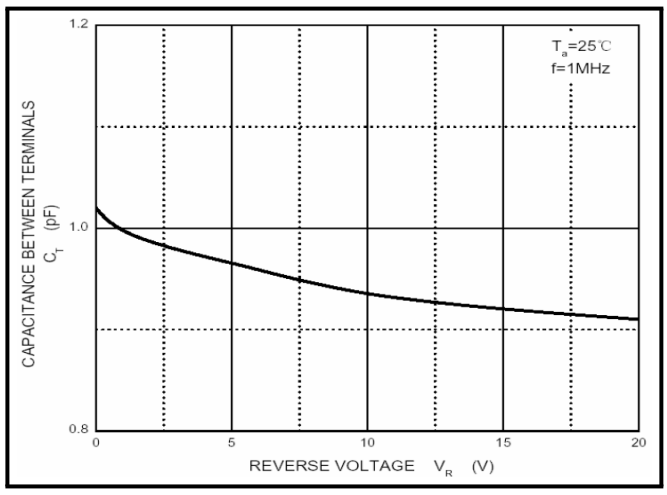
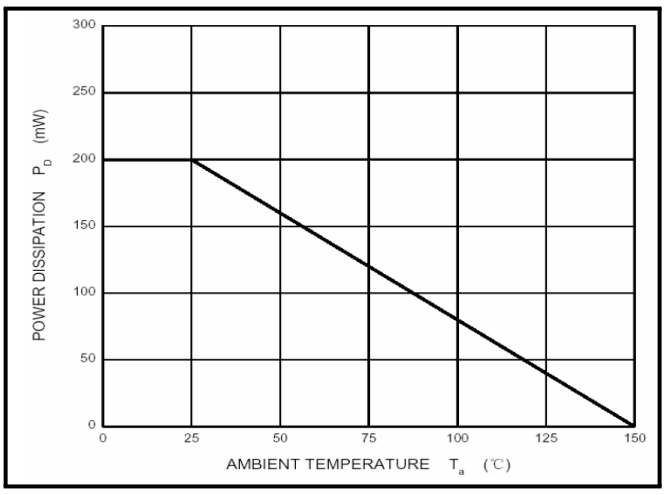


Figure 4: Power Derating Curve



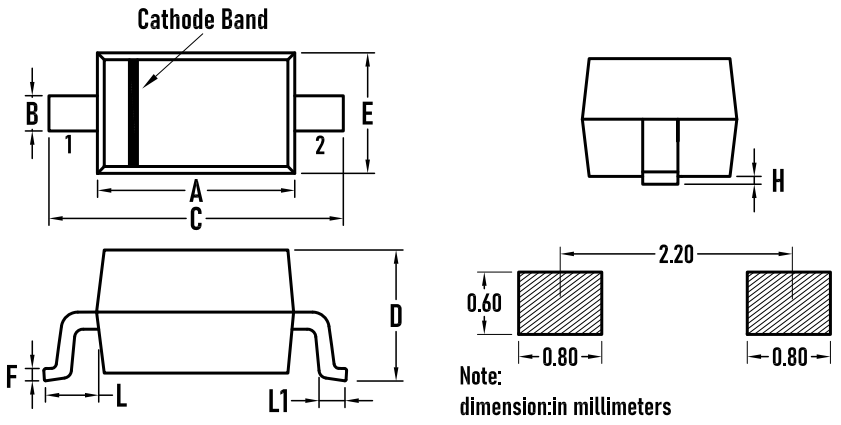
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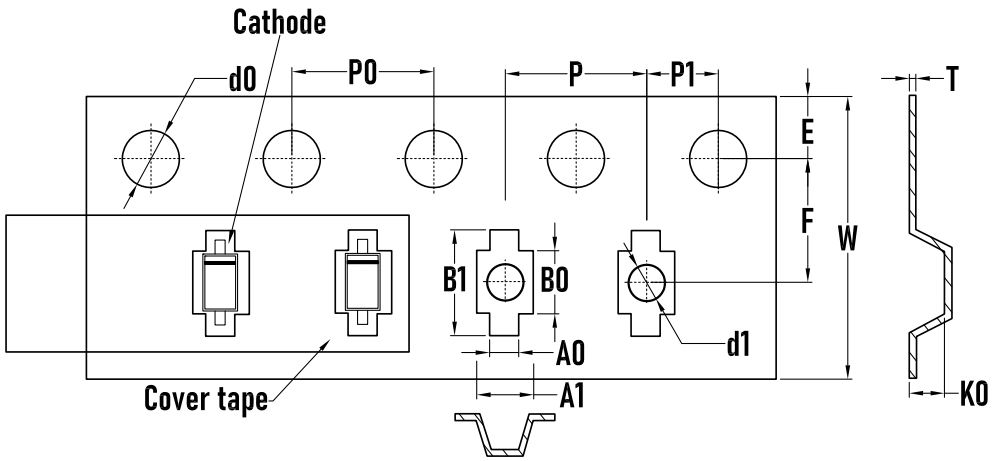
Fast Switching Diode

Outline Drawing - SOD-323



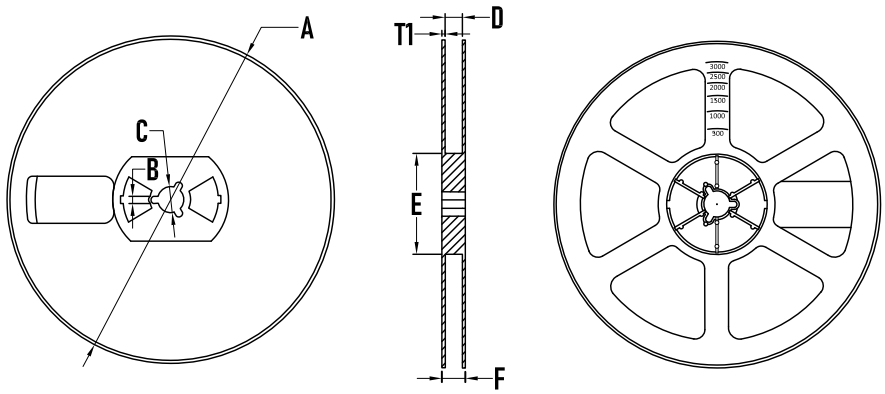
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.400	2.800	0.094	0.110
D	–	1.100	–	0.043
E	1.100	1.500	0.043	0.059
F	0.080	0.150	0.003	0.006
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Packaging Tape - SOD-323



SYMBOL	MILLIMETER
A0	0.80±0.10
A1	1.48±0.10
B0	1.80±0.10
B1	3.00±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.05±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.25 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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