BORN SEMICONDUCTOR

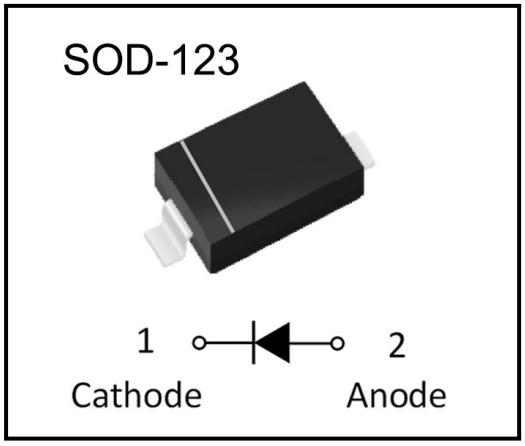
1N4148W

Fast Switching Diode

Features

- Fast Switching Device (T_{RR} <4.0 nS)
- Power Dissipation of 500mW
- High Stability and High Reliability
- Low reverse leakage

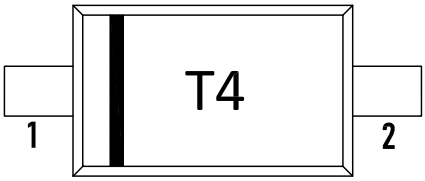
Package



Description

- SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
1N4148W	SOD-123	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
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250	°C/W
P_d	Power Dissipation	500	mW
T_J	Operating junction temperature	150	°C
T_S	Storage temperature range	-55 to +150	°C

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1N4148W

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	–	5	uA
V_F	Forward Voltage	I_F=10mA	–	1.00	V
		I_F=100mA	–	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	–	4	pF

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1N4148W

Fast Switching Diode

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

Figure 1: Forward Characteristics

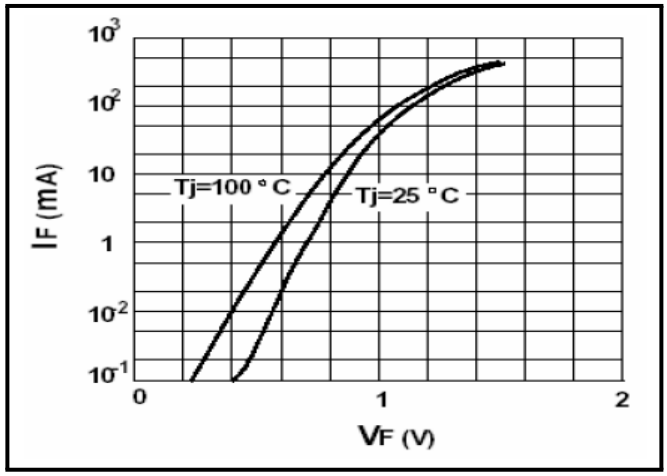


Figure 2: Admissible power dissipation versus ambient temperature

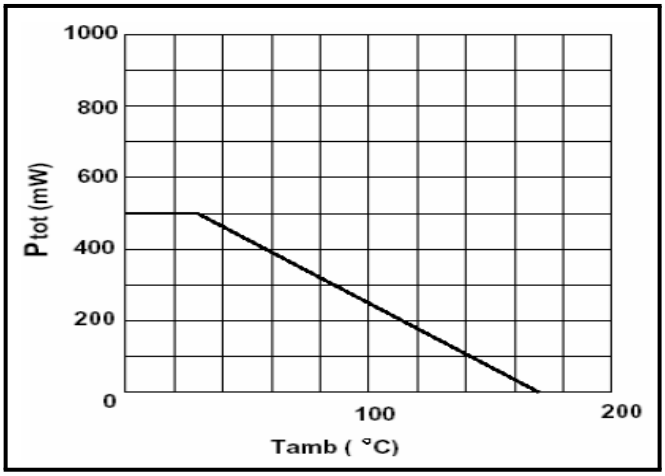


Figure 3: Leakage current versus junction temperature

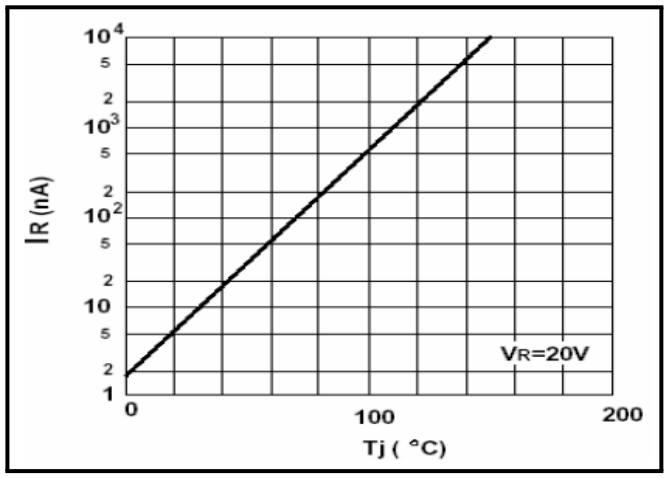


Figure 4: Reverse capactitance VS. reverse boltage

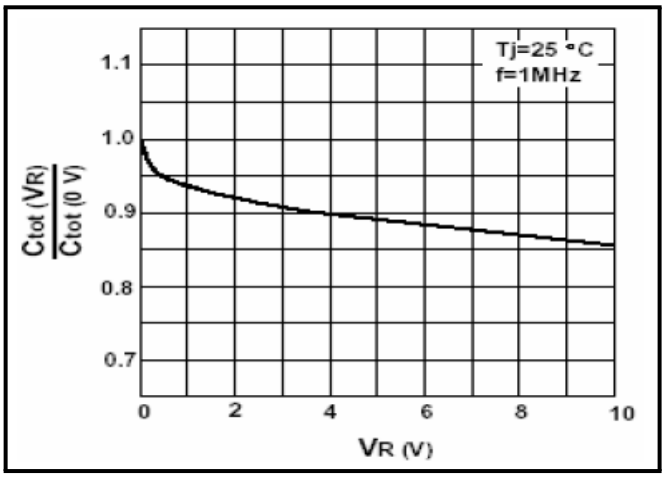
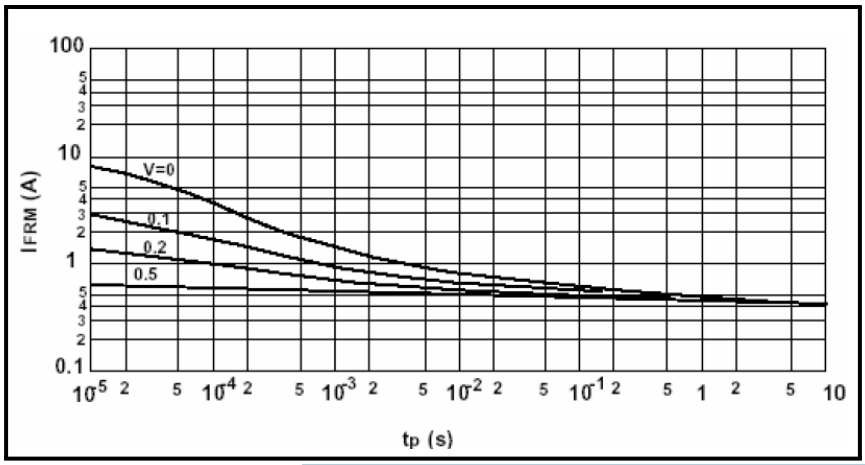


Figure 5: Admissible repetitive peak forward current VS. pulseduration

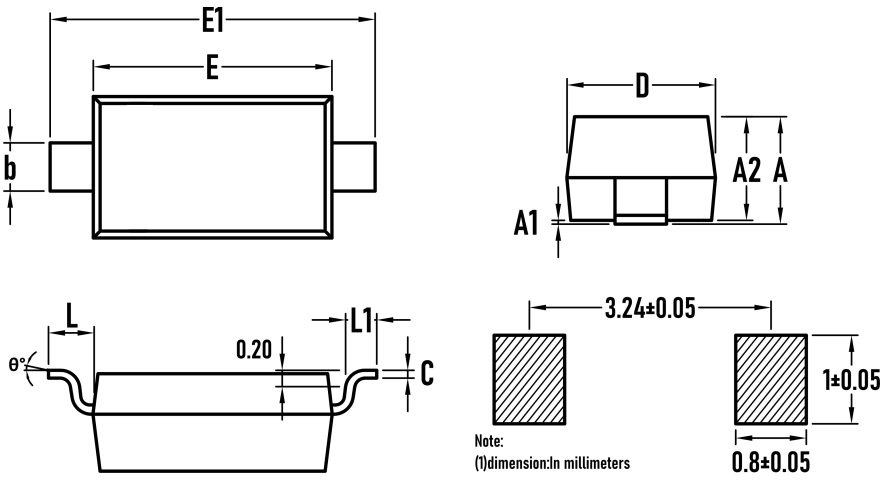


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1N4148W

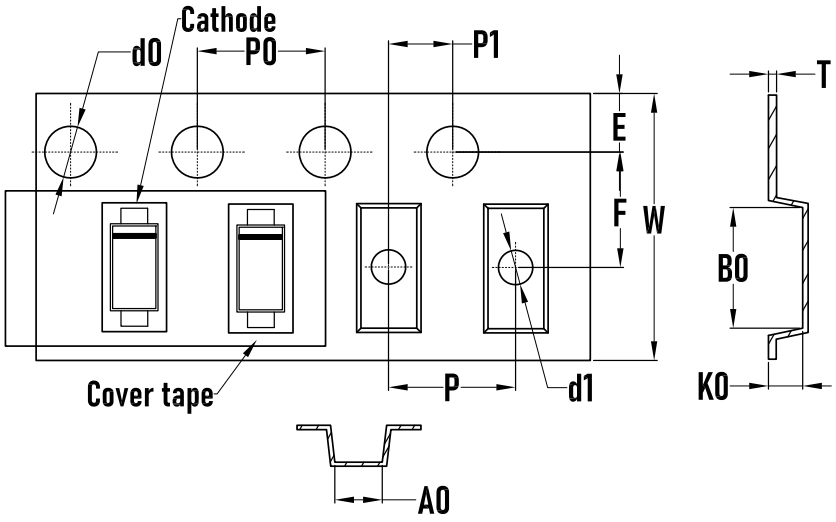
Fast Switching Diode

Package Information - SOD-123



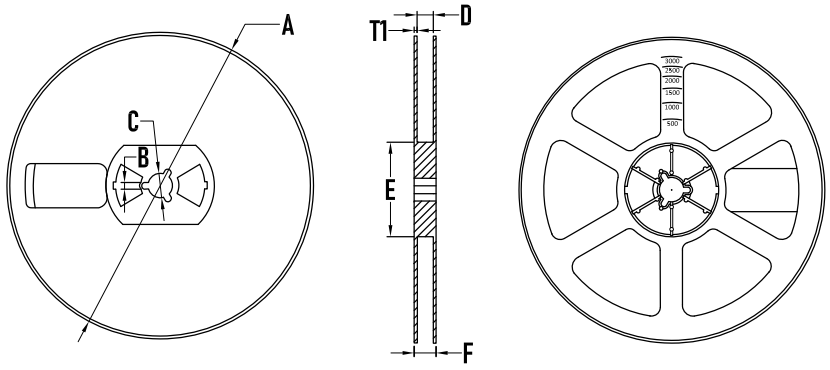
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.950	1.350	0.037	0.053
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500REF		0.020REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Packaging Tape - SOD-123



SYMBOL	MILLIMETER
A0	2.10±0.1
B0	4.0 ±0.1
d0	1.5±0.1
d1	1.0±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.25±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.1
T	0.2±0.02

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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