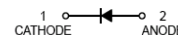


# Silicon Epitaxial Planar Diode



## Features:

- Fast Switching Speed :  $t_{rr} = 4\text{ns(Typ)}$
- Surface Mount Package Ideally Suited For Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Available in Lead Free Version



## Applications:

Surface mount fast switching diode

## Maximum Rating @ $T_a = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Reverse Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	300	mA
Average Rectified Output Current	$I_O$	150	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0 \mu\text{s}$ @ $t = 1.0 \text{s}$	$I_{FSM}$	2 1	A
Power Dissipation	$P_d$	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	$^\circ\text{C}$

## Electrical Characteristics @ $T_a = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min.	Max.	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	75	-	V	$I_R = 1\mu\text{A}$
Forward Voltage	$V_F$	-	0.715 0.855 1 1.25	V	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$
Reverse Current	$I_R$	-	1 25	$\mu\text{A}$ nA	$V_R = 75\text{V}$ $V_R = 20\text{V}$
Capacitance between terminals	$C_T$	-	2	pF	$V_R = 0, f = 1\text{MHz}$
Reverse Recovery Time	$t_{rr}$	-	4	ns	$I_F = I_R = 10\text{mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

# Silicon Epitaxial Planar Diode

Typical Characteristics @  $T_a = 25^\circ\text{C}$  unless otherwise specified

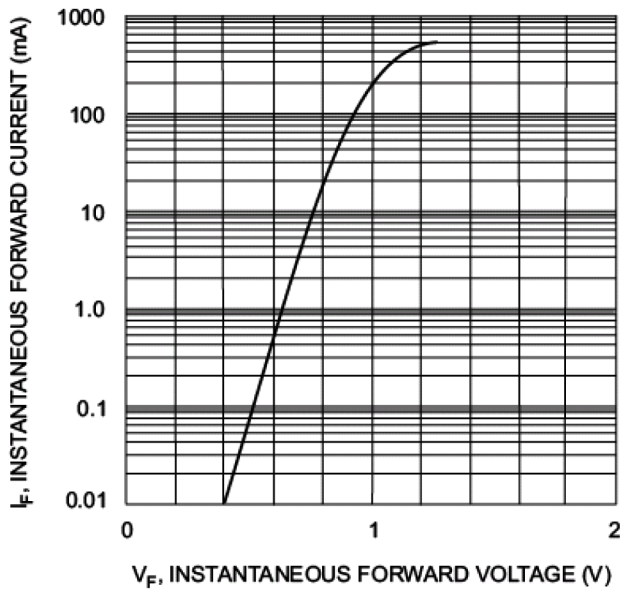


Fig. 1 Forward Characteristics

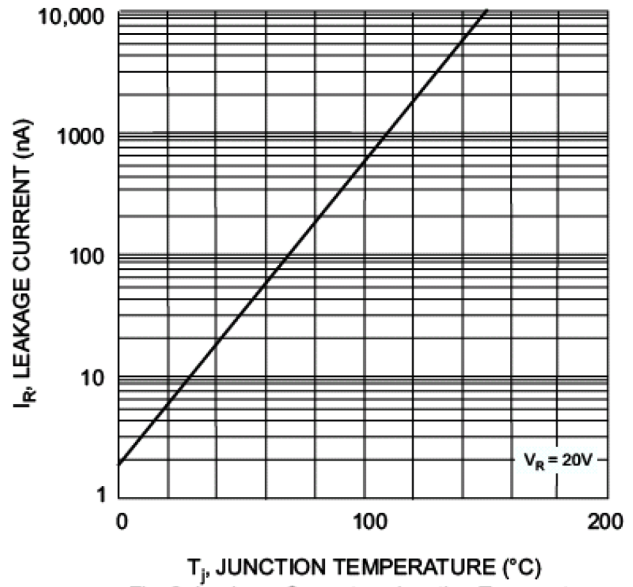
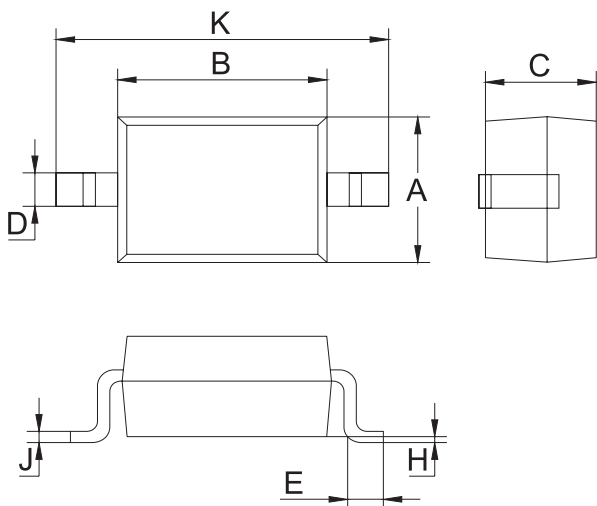


Fig. 2 Leakage Current vs Junction Temperature

## Package Outline

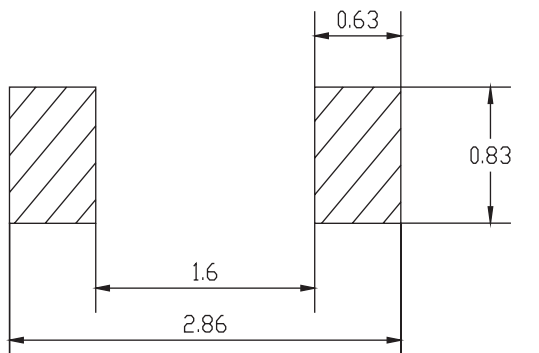
Plastic surface mounted package



SOD-323		
Dim	Min	Max
A	1.275	1.325
B	1.675	1.725
C	0.9 Typical	
D	0.25	0.35
E	0.27	0.37
H	0.02	0.1
J	0.1 Typical	
K	2.6	2.7
All Dimensions in mm		

# Silicon Epitaxial Planar Diode

## Soldering Foot print



Unit : mm

## Package Information

Device	Package	Shipping
1N4148WS	SOD-323	3,000 / Tape & Reel

## Part Number Table

Description	Part Number
Silicon Epitaxial Planar Diode	1N4148WS

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