

### Surface Mount Switching Diode

**(Pb)** Lead(Pb)-Free

#### Features:

- \*High Speed  $\leq 4\text{ns}$
- \*Low Rever Leakage Current
- \*Surface Mount Package Ideally Suited for Automatic Insertion

#### Mechanical Data:

- \*Case: SOD-123, Molded Plastic
- \*Terminals: Solderable per MIL-STD-202 Method 208
- \*Polarity: Cathode Band
- \*Weight: 0.01grams(approx)

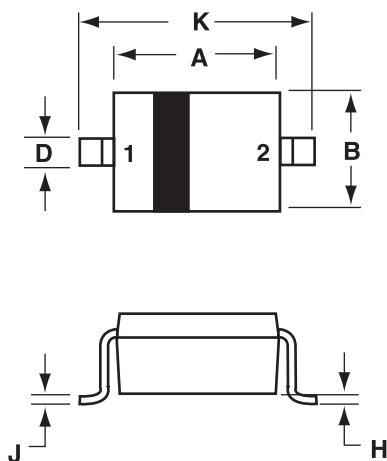
**SWITCHING DIODE**  
**150mAMPERS**  
**100VOLTS**



**SOD-123**

### SOD-123 Outline Dimensions

Unit:mm



SOD-123		
Dim	Min	Max
A	2.55	2.85
B	1.40	1.80
C	0.95	1.35
D	0.50	0.70
E	0.30 REF	
H	-	0.10
J	-	0.15
K	3.55	3.85

PIN 1. CATHODE  
2. ANODE

## Maximum Ratings

Rating	Symbol	Value	Unit
Nop-Reptitive Reverse Voltage Peak	VRM	100	Vdc
Peak Repetitive Reverse Voltage	VRRM	75	Vdc
Working Peak Reverse Voltage	VRWM		
DC Blocking Voltage	VR		
Forward Continuous Current (1)	IFM	300	mAdc
Average Rectified Output Current	Io	150	mAdc
Non-Repetitive Peak Forward Surge Current @ t=1.0us @ t=1.0s	IFSM	2.0 1.0	Adc

## Thermal Characteristics

Characteristics	Symbol	Max	Unit
Total Device Dissipation (1)	PD	400	mW
Thermal Resistance, Junction to Ambient Air (1)	RθJA	315	°C/W
Junction and Storage Temperature	TJ, Tstg	-55 to + 150	°C

## Electrical Characteristics (TA=25 °C Unless Otherwise note)


Characteristics	Symbol	Min	Max	Unit
-----------------	--------	-----	-----	------

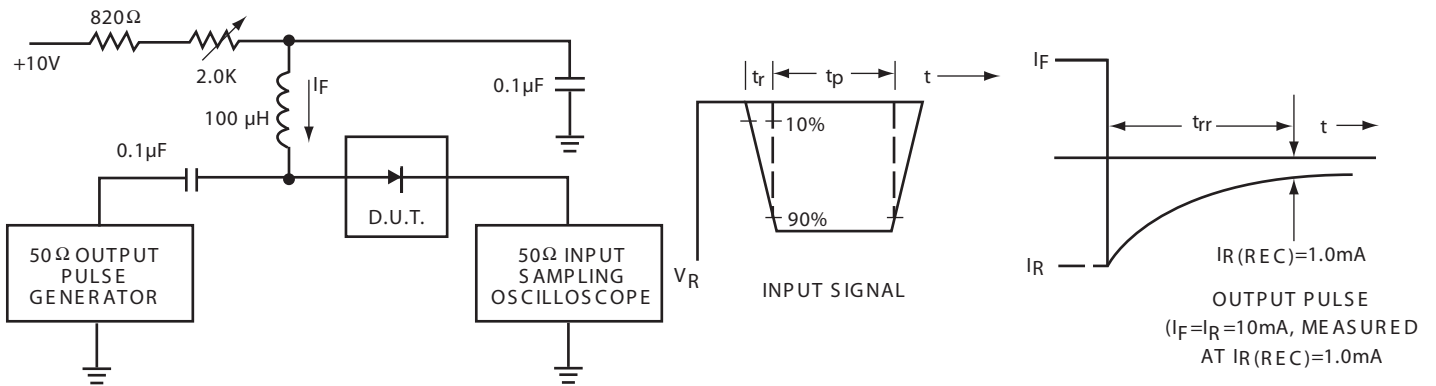
## Off Characteristics

Forward Voltage IF=1.0mA IF=10mA IF=50mA IF=150mA	VF	—	0.715 0.855 1.00 1.25	Vdc
Reverse Voltage Leakage Current VR=75Vdc VR=20Vdc	IR	— —	1.0 25	μAdc nAdc
Diode Capacitance (VR=0, f=1.0MHz)	CT	—	4.0	pF
Reverse Recover Time (IF=IR=10mAdc)	trr	—	4.0	ns

1. Valid provided that terminals are kept at ambient temperature.

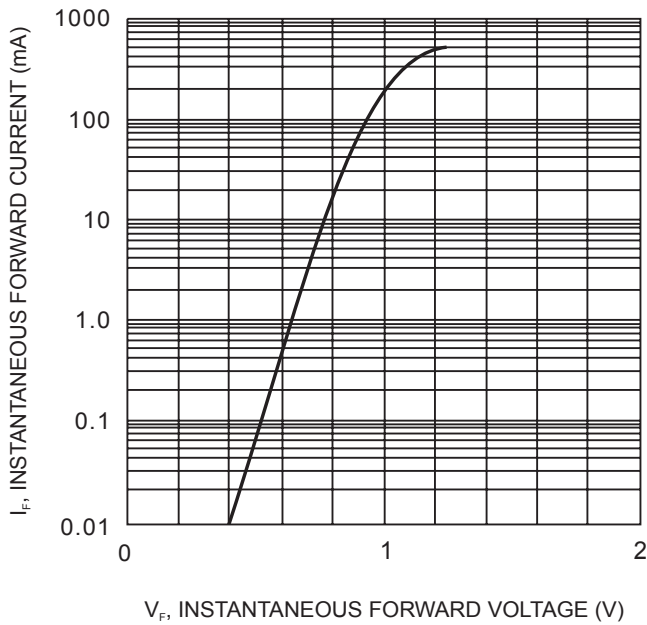
## Device Marking

Item	Marking	Equivalent Circuitdiagram
1N4148W	A2 , T4	

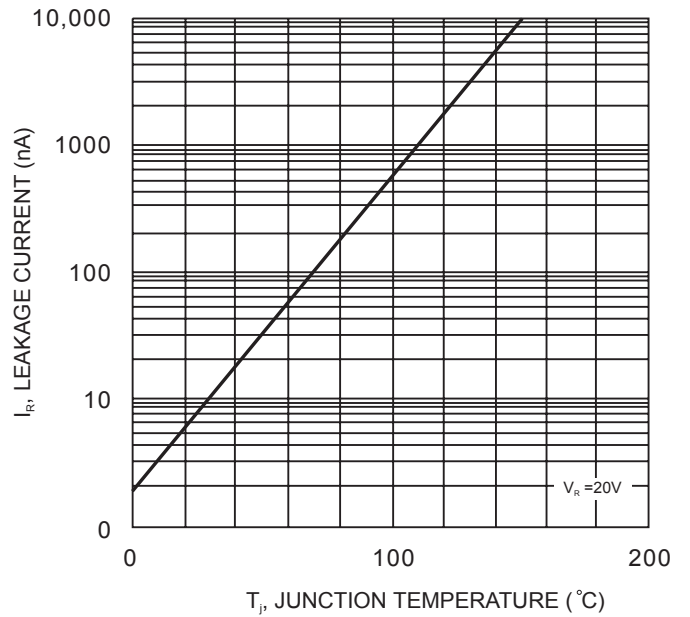


- Notes: 1. A 2.0 kΩ variable resistor for a Forward Current ( $I_F$ ) of 10 mA  
 2. Input pulses is adjusted so  $I_R(\text{peak})$  is equal to 10 mA  
 3.  $t_p \gg t_{rr}$

**FIG.1 Recovery Time Equivalent Test Circuit**



**FIG.2 Forward Voltage**



**FIG.3 Leakage Current vs Junction Temperature**