

**SURFACE MOUNT  
FAST SWITCHING DIODE**

**REVERSE VOLTAGE – 75 Volts  
FORWARD CURRENT – 0.15 Ampere**

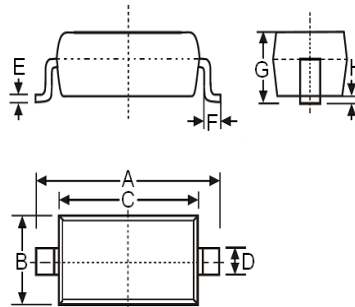
**FEATURES**

- Fast switching speed
- Ideally suited for automatic insertion
- For general purpose switching applications

**MECHANICAL DATA**

- Case: SOD-323 Plastic
- Case material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture sensitivity: Level 1 per J-STD-020D
- Lead free in RoHS 2002/95/EC compliant

**SOD-323**



SOD-323		
Dim.	Min.	Max.
A	2.50	2.70
B	1.20	1.40
C	1.60	1.80
D	0.25	0.35
E	0.08	0.15
F	0.25	0.40
G	---	1.0
H	0.00	0.10
Dimensions in millimeter		

**Maximum Ratings & Thermal Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Symbol	1N4148WS	Units
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	75	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
Non-repetitive Peak Forward Surge Current	I <sub>FM</sub>	500	mA
Peak Forward Surge Current	I <sub>FSM</sub>	2 1	A
Power Dissipation *T <sub>a</sub> =25°C	P <sub>D</sub>	200	mW
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	635	°C/W
Operating Temperature Range	T <sub>J</sub>	-55~+150	°C
Storage Temperature Range	T <sub>STG</sub>	-65~+150	°C

**Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

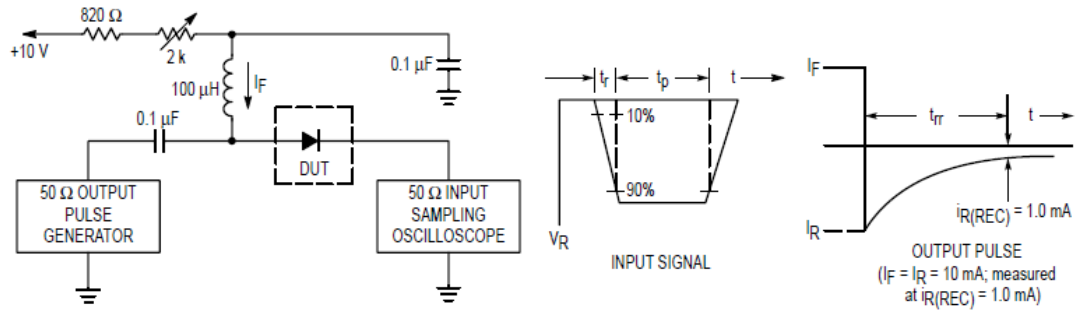
Characteristic	Test Condition	Symbol	1N4148WS	Unit
Maximum Forward Voltage	I <sub>F</sub> = 10mA	V <sub>F</sub>	1000	mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	V <sub>R</sub> = 75V	I <sub>R</sub>	5	uA
	V <sub>R</sub> = 20V		25	nA
Typical Diode Capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>D</sub>	4	pF
Reverse Recovery time	I <sub>R</sub> = I <sub>F</sub> = 10mA (Figure 1)	trr	4	ns

\* FR-4 Minimum Pad.

# RATING AND CHARACTERISTIC CURVES

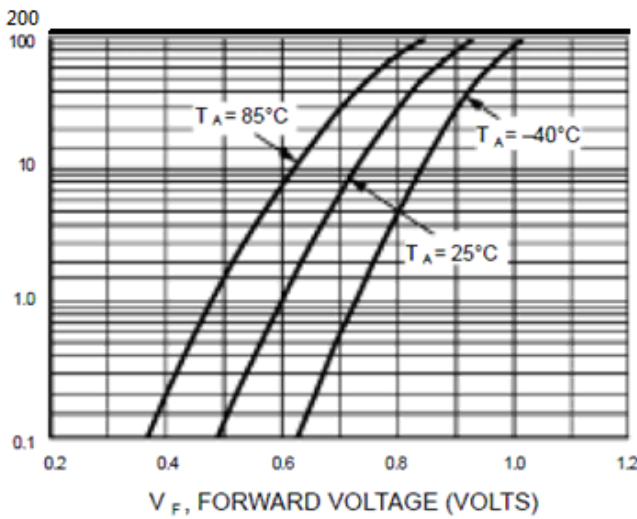


**Fig.1 Recovery Time Equivalent Test Circuit**

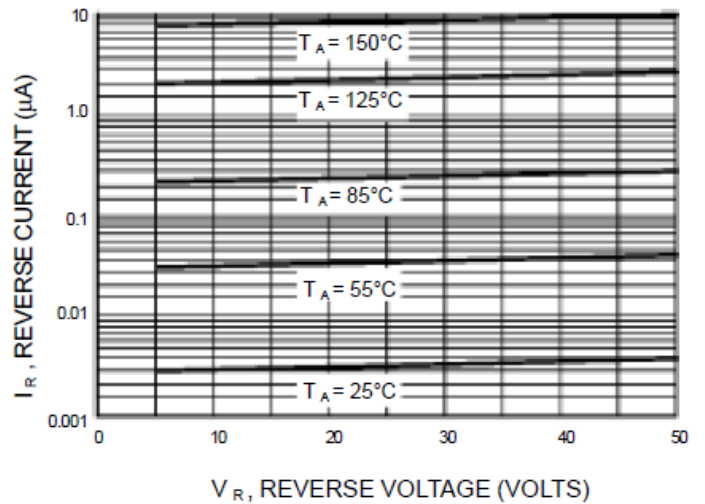


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.
- 2. Input pulse is adjusted so  $I_{R(peak)}$  is equal to 10mA.
- 3.  $t_p \gg t_r$

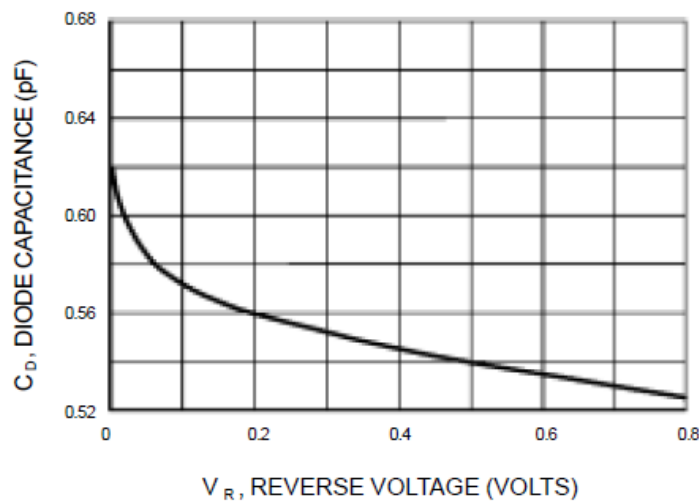
**Fig.2 Typical Forward Characteristics**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Capacitance Characteristics**



## 1N4148WS

Device Marking :

Device P/N	Marking code	Equivalent Circuit Diagram
1N4148WS	5D	1  2

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