

**SURFACE-MOUNT
FAST SWITCHING DIODE**

**REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 0.15 Amperes**

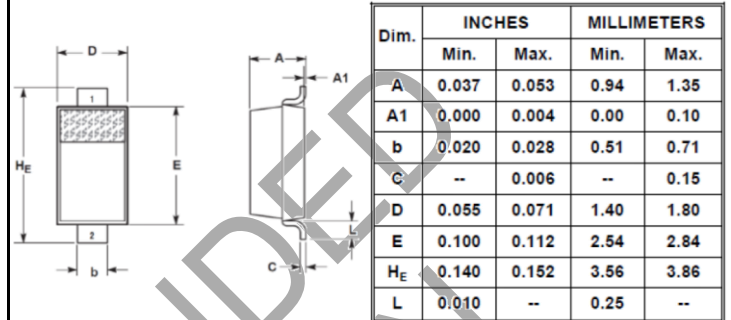
FEATURES

- Fast switching speed
- Ideally suited for automatic insertion
- For general purpose switching applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package: SOD-123 plastic
- Package Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.), "Halogen-free"
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free in RoHS 2002/95/EC compliant
- Weight: 11.67mg (Approximate)

SOD-123 Plastic



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at +25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Non-repetitive peak reverse voltage	V_{RM}	100	V
Repetitive peak reverse voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
Forward continuous current	I_{FM}	300	mA
Average rectified output current	I_O	150	mA
Non-repetitive peak forward current @ $t = 1\mu s$	I_{FSM}	2	A
Repetitive peak forward current	I_{FRM}	300	mA
Power dissipation	P_D	400	mW
Operation temperature range	T_J	+150	°C
Storage temperature range	T_{STG}	-65 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage	$I_F = 1mA$	V_F	715	mV
	$I_F = 10mA$		855	
	$I_F = 50mA$		1000	
	$I_F = 150mA$		1250	
Reverse leakage current	$V_R = 75V$	I_R	2500	nA
	$V_R = 20V$		25	
Typical junction capacitance	$V_R = 0V, f = 1MHz$	C_D	2	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance	R_{thJA}	357	°C/W
	R_{thJC}	200	

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP.	UNIT
Reverse recovery time	$I_F = 0.5A, I_{rr} = 0.25A, I_R = 1.0A$	t_{rr}	4	ns

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

RATING AND CHARACTERISTIC CURVES
1N4148W(LS)

Fig. 1 Typical Forward Characteristics

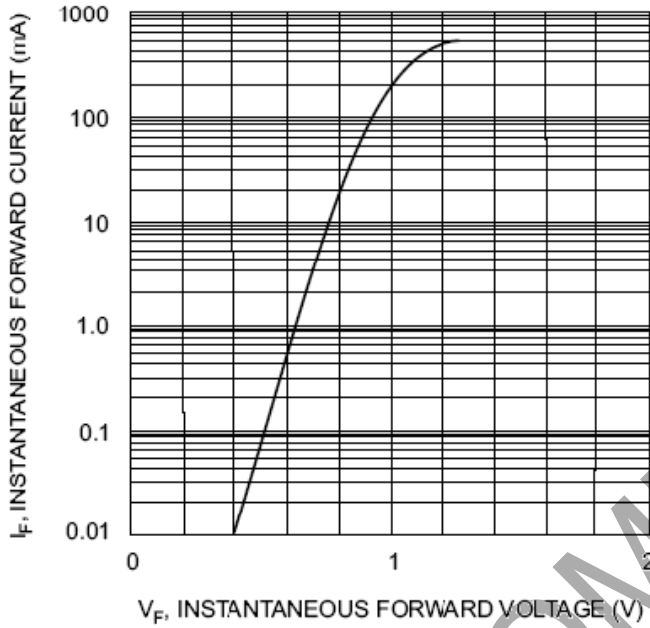
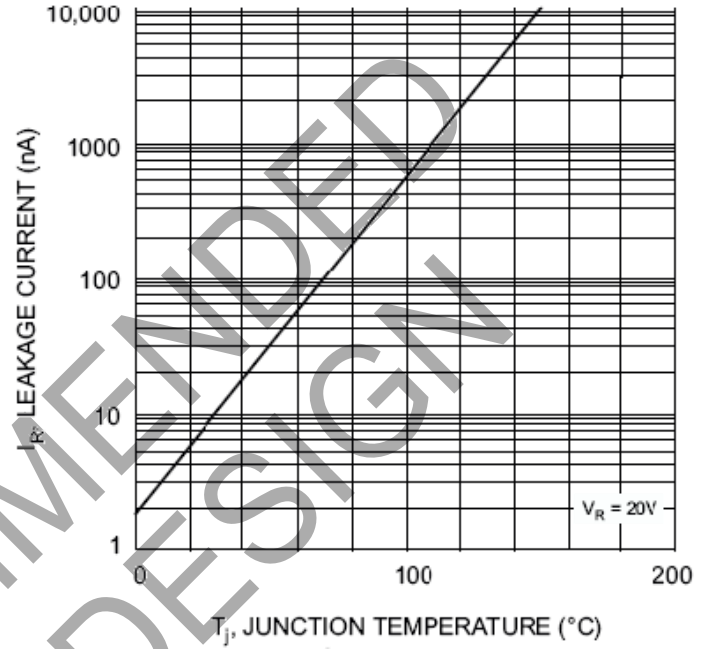


Fig. 2 Typical Reverse Characteristics

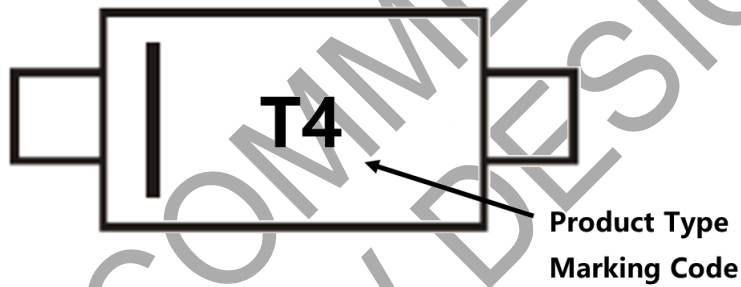


NOT RECOMMENDED FOR NEW DESIGN

Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
1N4148W	SOD-123 Plastic	3000pcs	Tape & Reel

Marking Information:



Device P/N	Marking Code	Pin Diagram	Equivalent Circuit Diagram
1N4148W	T4		

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