

1N4148W

400mW Surface Mount Switching Diode-100V

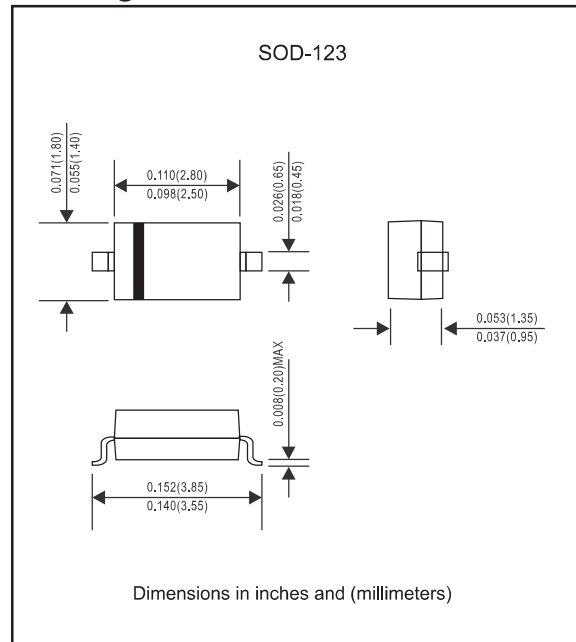
Features

- Fast Switching Device ($t_{rr} < 4.0$ ns)
- General Purpose Diodes
- Flat Lead SOD-123 Small Outline Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228

Mechanical data

- Epoxy:UL94-VO rated flame retardant
- Case : Molded plastic, SOD-123
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package Outline



Maximum ratings and Electrical characteristics (AT $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	Symbol	1N4148W	UNIT
Maximum reverse voltage	V_R	75	V
Maximum peak reverse voltage	V_{RM}	100	V
Maximum RMS voltage	V_{RMS}	50	V
Maximum DC blocking voltage	V_{DC}	75	V
Maximum average forward current at $T_A = 25^\circ\text{C}$	I_O	150	mA
Maximum peak forward surge current, 1.0us	I_{FSM}	2	A
Maximum power dissipation derate above 25°C	P_D	410	mW
Maximum forward voltage	V_F	0.715@0.001A 0.855@0.01A 1.0@0.05A 1.25@0.15A	V
Maximum DC reverse current at rated DC blocking voltage $T_J = 25^\circ\text{C}$	I_R	0.025@20V 2.5@75V	uA
Typical junction capacitance (Notes 1)	C_J	1.5	pF
Maximum reverse recovery time (Notes 2)	t_{rr}	4.0	ns
Maximum thermal resistance	$R_{\theta JA}$	450	$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Notes :

1. C_J at $V_R = 0\text{V}$, $f = 1\text{MHz}$

2. From $I_F = 10\text{mA}$ to $I_R = 1\text{mA}$, $V_R = 6\text{V}$, $R_L = 100\text{ohm}$

Rating and characteristic curves (1N4148W)

Fig. 1 TYPICAL FORWARD CHARACTERISTICS

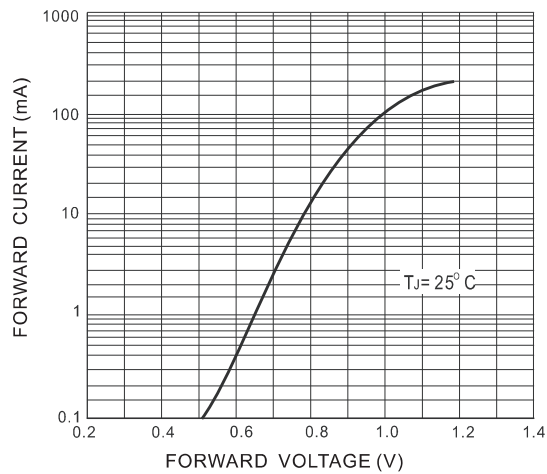


Fig. 2 TYPICAL REVERSE CHARACTERISTICS

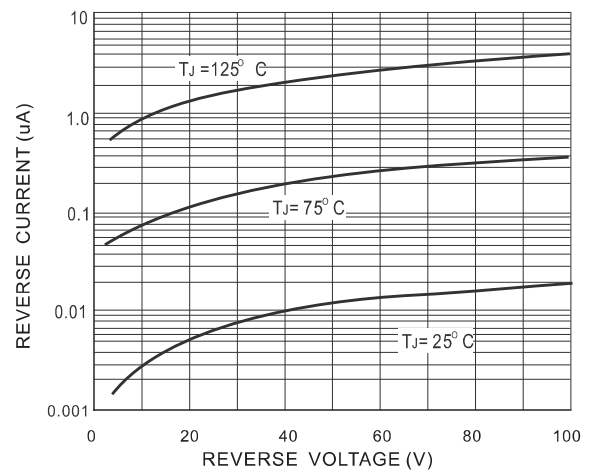


Fig.3-TYPICAL JUNCTION CAPACITANCE

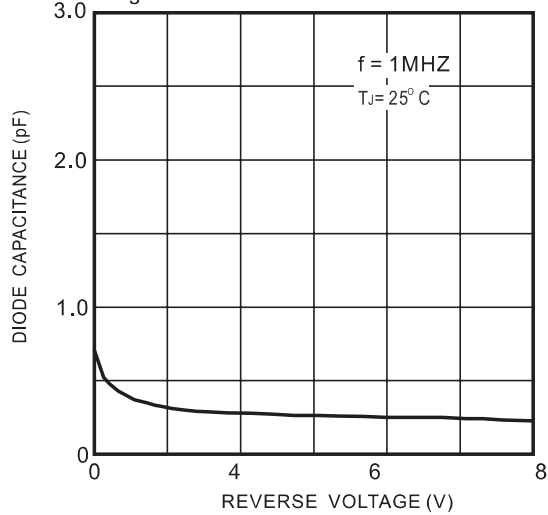
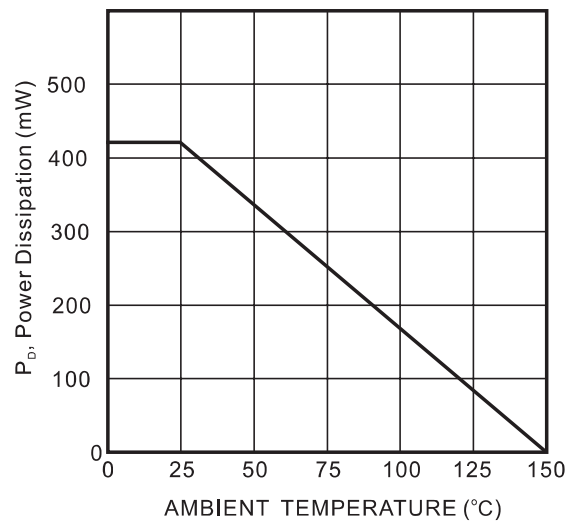
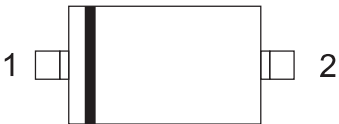


Fig. 4 POWER DERATING CURVE



1N4148W

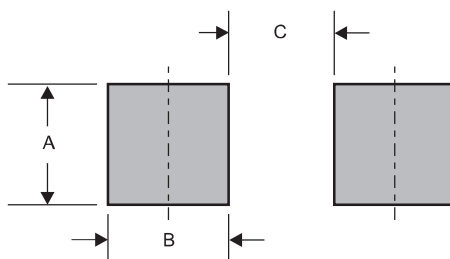
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
1N4148W	T4

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.048 (1.22)	0.036 (0.91)	0.093 (2.36)

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	30,000	183*183*123	178	382*262*387	240,000	9.5