

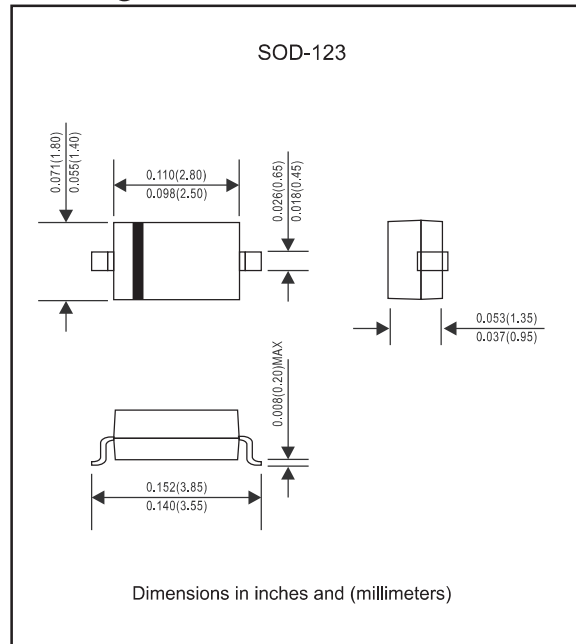
Features

- 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	$^\circ\text{C}/\text{W}$
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

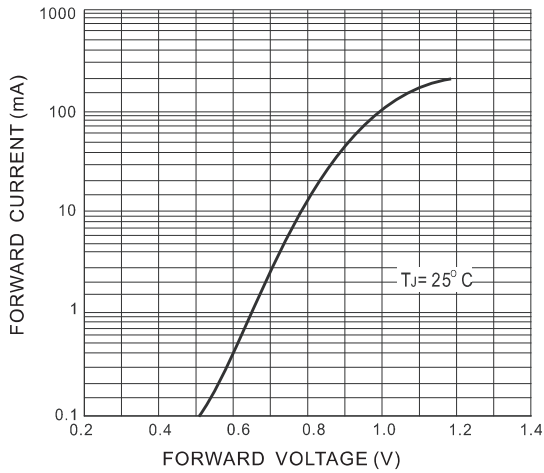


Fig. 2 TYPICAL REVERSE CHARACTERISTICS

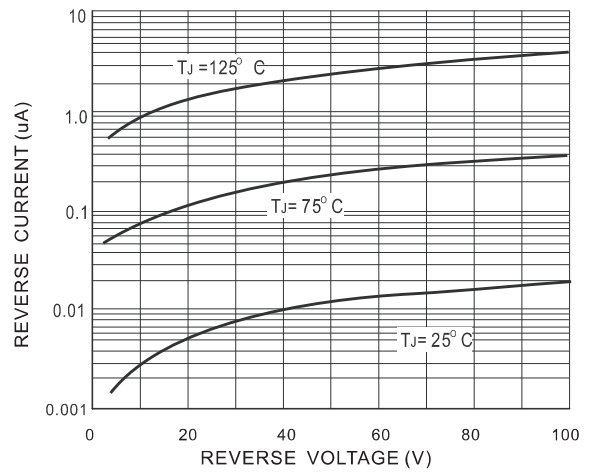


Fig.3-TYPICAL JUNCTION CAPACITANCE

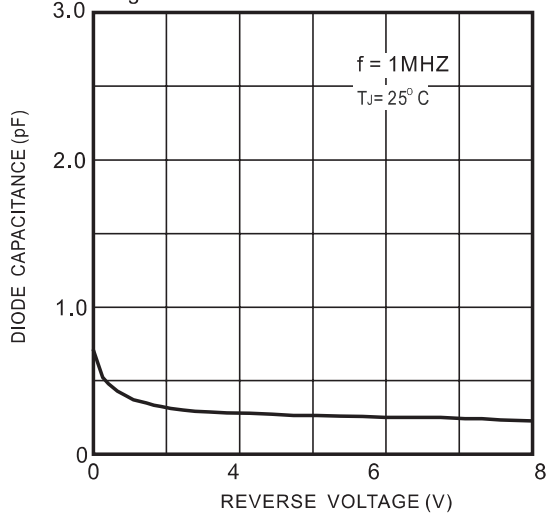
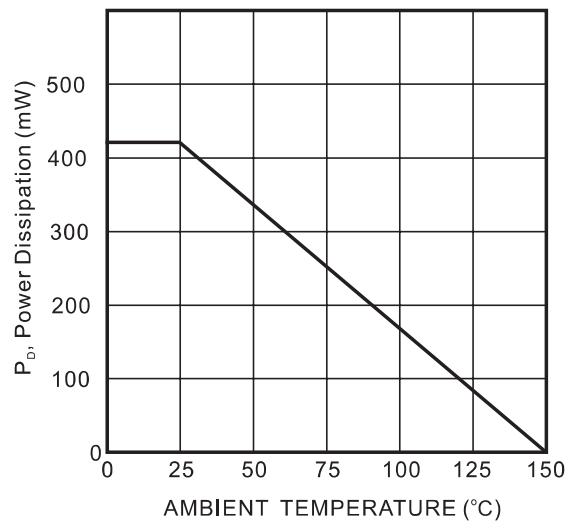




Fig. 4 POWER DERATING CURVE



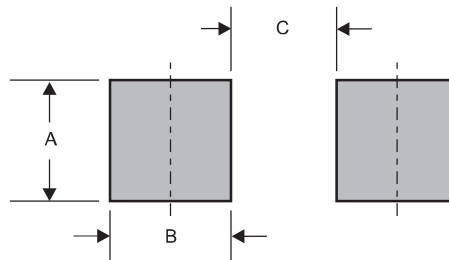
Pinning information

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