

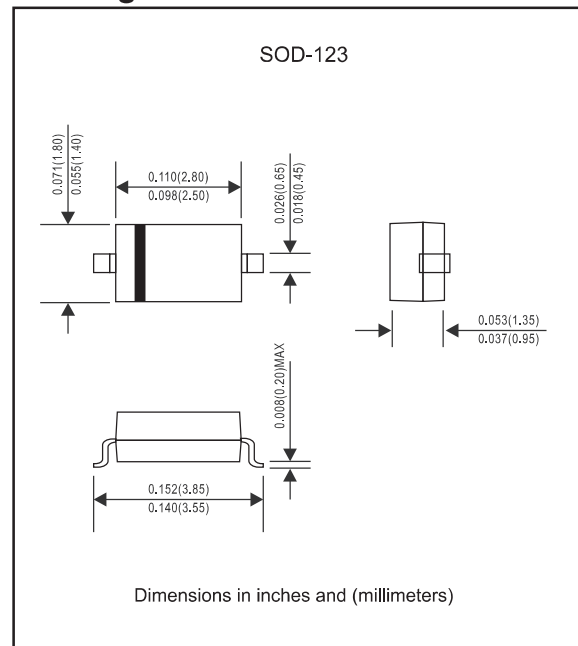
### Features

- 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
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

### 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-Q1	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 $25^\circ\text{C}$	$P_D$	400	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

Fig. 1 TYPICAL FORWARD CHARACTERISTICS

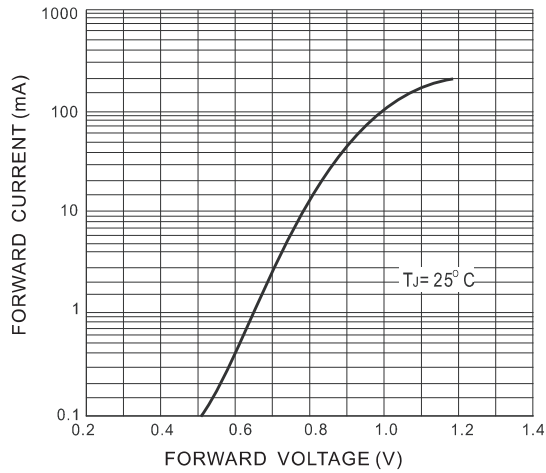


Fig. 2 TYPICAL REVERSE CHARACTERISTICS

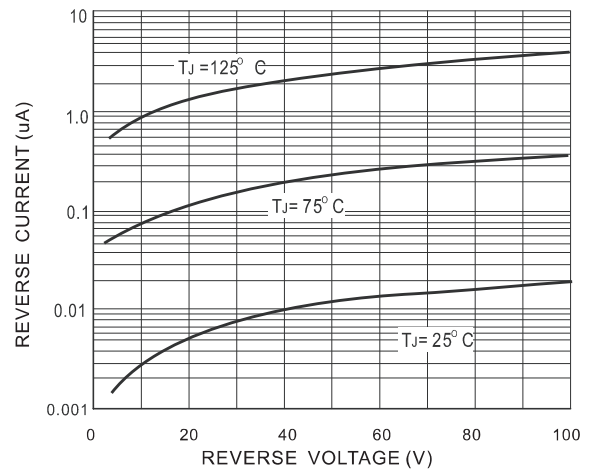


Fig.3-TYPICAL JUNCTION CAPACITANCE

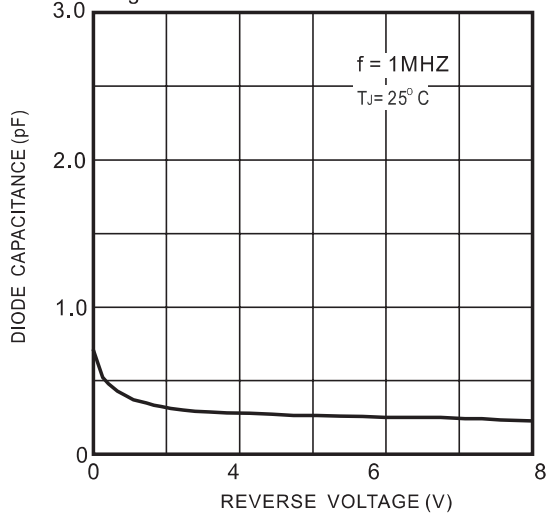
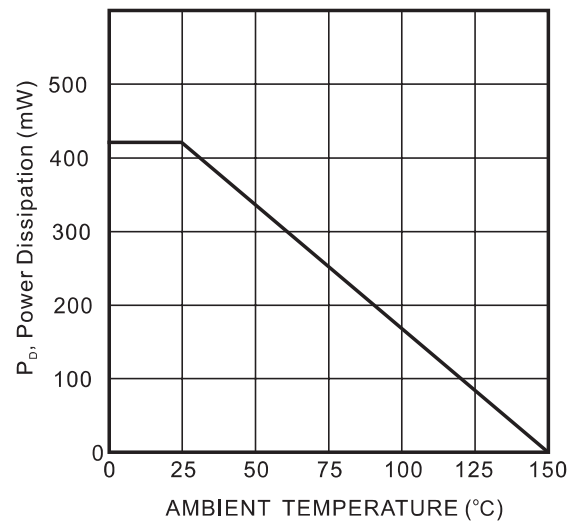
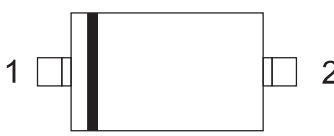



Fig. 4 POWER DERATING CURVE



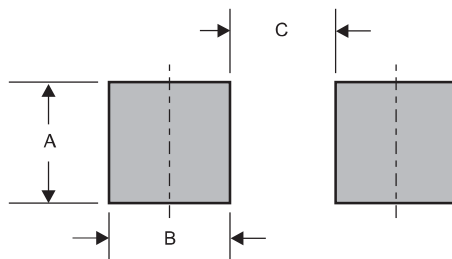
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
1N4148W-Q1	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)