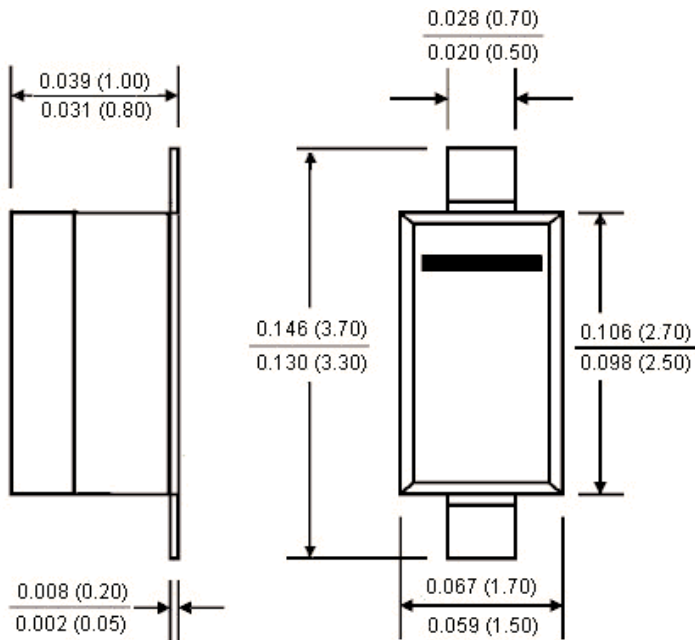


### Features:

- Fast switching device ( $T_{RR} < 4.0\text{nS}$ ).
- General purpose diodes.
- Flat lead SOD-123 small outline plastic package.
- Surface device type mounting.
- Moisture sensitivity level 1.
- Clip bonding construction, good thermal capability.
- Pb free version and RoHS compliant.
- Matte tin (Sn) lead finish with nickel (Ni) underplate.
- Band indicates cathode.



### SOD-123F



Dimensions : Inches (Millimetres)

### Maximum Ratings at Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

### Maximum Ratings

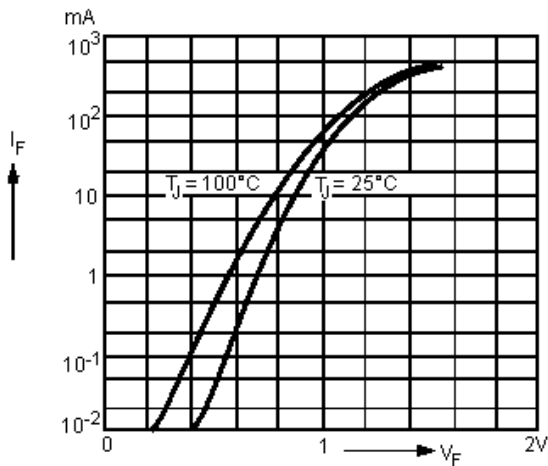
| Type Number                             | Symbol         | Value        | Units |
|---|----------------|--------------|-------|
| Power Dissipation                       | $P_d$          | 400          | mW    |
| Non-Repetitive Peak Reverse Voltage     | $V_{RSM}$      | 100          | V     |
| Repetitive Peak Reverse Voltage         | $V_{RRM}$      | 75           |       |
| Repetitive Peak Forward Current         | $I_{FRM}$      | 300          | mA    |
| Continuous Forward Current              | $I_o$          | 150          |       |
| Operating and Storage Temperature Range | $T_J, T_{STG}$ | -65 to + 150 | °C    |

## Electrical Characteristics

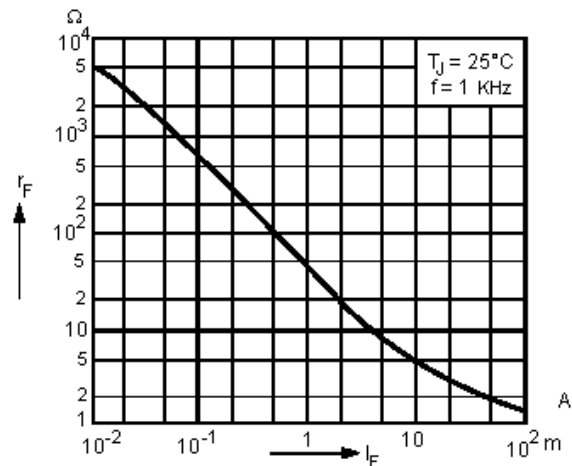
| Type Number   | Symbol   | Minimum   | Maximum | Units               |
|---|----------|-----------|---------|---------------------|
| Breakdown Voltage<br>$I_R = 100\mu\text{A}$<br>$I_R = 5\mu\text{A}$ | $B_V$    | 100<br>75 | -       | V                   |
| Forward Voltage<br><b>1N4148W</b><br>$I_F = 10\text{mA}$            | $V_F$    | -         | 1.0     |                     |
| Reverse Leakage Current<br>$V_R = 20\text{V}$<br>$V_R = 75\text{V}$ | $I_R$    | -         | 25<br>5 | nA<br>$\mu\text{A}$ |
| Junction Capacitance<br>$V_R = 0, f = 1.0\text{MHz}$                | $C_j$    | -         | 4.0     | pF                  |
| Reverse Recovery Time (Note 1)                                      | $t_{rr}$ | -         |         | nS                  |

**Notes :** 1. Reverse Recovery Test Conditions:  $I_F = 10\text{mA}$ ,  $I_R = 60\text{mA}$ ,  $R_L = 100\Omega$ ,  $I_{RR} = 1\text{mA}$

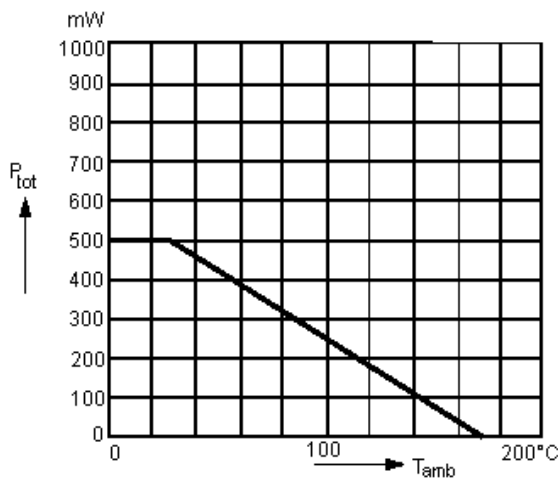
## Ratings and Characteristic Curves (1N4148W)



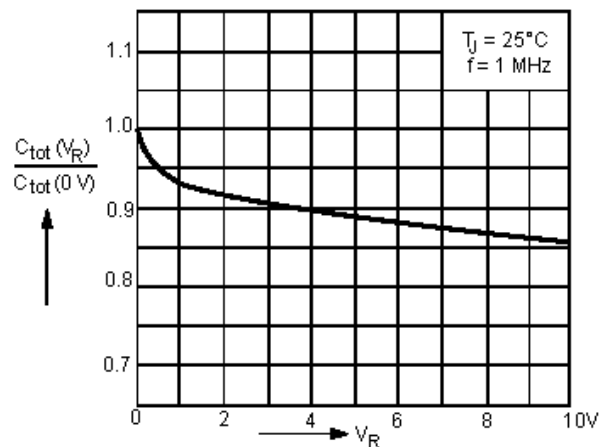
Forward Characteristics



Dynamic Forward Resistance vs. Forward Current

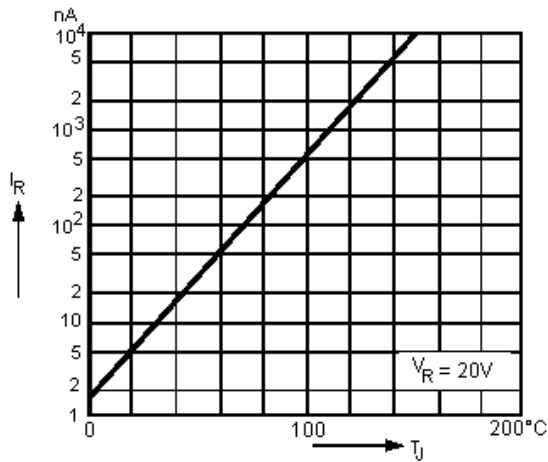


Admissible Power Dissipation vs. Ambient Temperature

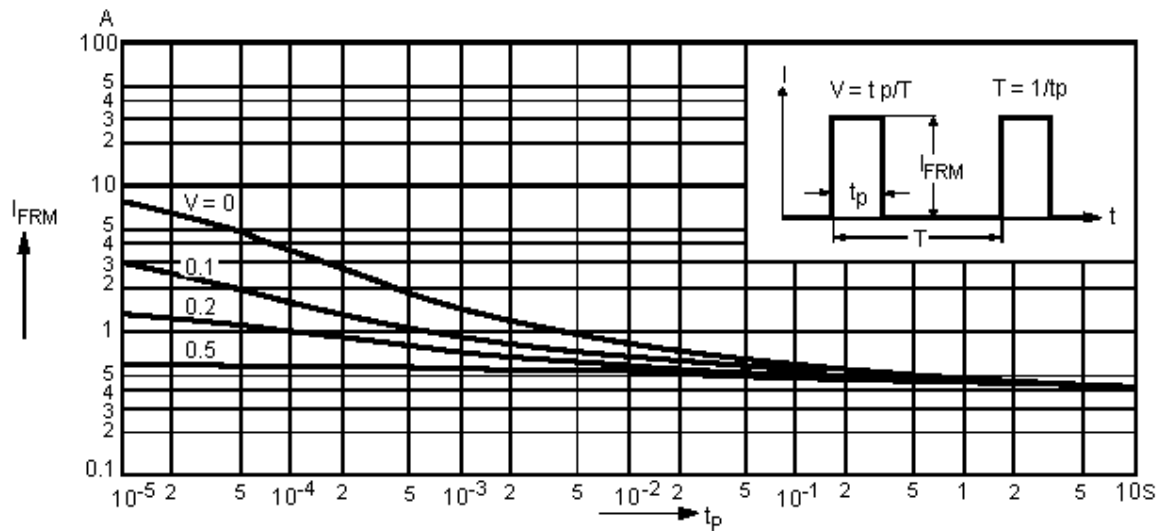


Reverse Capacitance vs. Reverse Voltage

## Ratings and Characteristic Curves (1N4148W)



Leakage Current vs. Junction Temperature



Admissible Repetitive Peak Forward Current vs. Pulse Duration

### Part Number Table

| Description                 | Part Number |
|-----------------------------|-------------|
| Diode, High Speed, SOD-123F | 1N4148W     |

## Notes:

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