Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

# 1N4448W

## 500mW 100 Volts Switching Diode

## Features

- Fast Switching Speed
- For General Purpose Switching Applications
- Surface Mount Package Ideally Suited for Automatic Insertion

## Mechanical Data

- Marking Code: T5
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

## Maximum Ratings

Maximum Ratings @ 25°C Unless Otherwise Specified

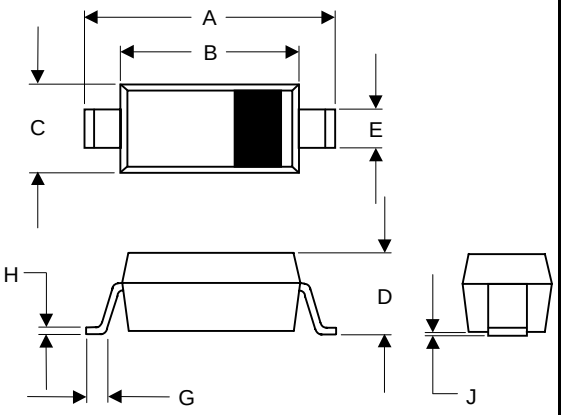
| | | | |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 75 | V |
| Peak Reverse Voltage | $V_{RM}$ | 100 | V |
| Average Rectified Current | $I_O$ | 250 | mA |
| Peak Forward Surge Current | $I_{FSM}$ | 2 | A |
| Power Dissipation | $P_D$ | 500 | mW |
| Thermal Resistance* | R | 35 | °C/W |
| Operation/Storage Temp. Range | $T_j$, $T_{STG}$ | -55 to +150 | °C |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Maximum Instantaneous Forward Voltage | $V_F$ | 1.0V | $I_{FM}$ = 100mA; $T_J$ = 25°C* |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 25nA<br>50µA<br>5uA | $V_R$=20Volts $T_J$ = 25°C<br>$T_J$ = 150°C<br>$V_R$=75Volts |
| Typical Junction Capacitance | $C_J$ | 4pF | Measured at 1.0MHz, $V_R$=4.0V |
| Reverse Recovery Time | $T_{rr}$ | 4nS | $I_F$=10mA $V_R$ = 6V $R_L$=100Ω |

* Valid provided that terminals are kept at ambient temperature

SOD123




| DIM | INCHES | | MM | | NOTE |
|---|---|---|---|---|---|
| | MIN | MAX | MIN | MAX | |
| A | .140 | .152 | 3.55 | 3.85 | |
| B | .100 | .112 | 2.55 | 2.85 | |
| C | .055 | .071 | 1.40 | 1.80 | |
| D | ----- | .053 | ----- | 1.35 | |
| E | .012 | .031 | 0.30 | .78 | |
| G | .006 | ----- | 0.15 | ----- | |
| H | ----- | .01 | ----- | .25 | |
| J | ----- | .006 | ----- | .15 | |

SUGGESTED SOLDER PAD LAYOUT

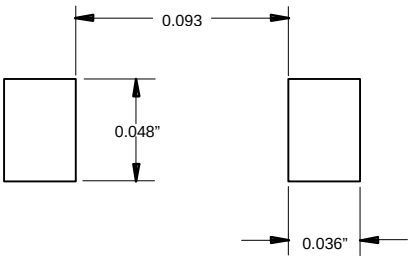
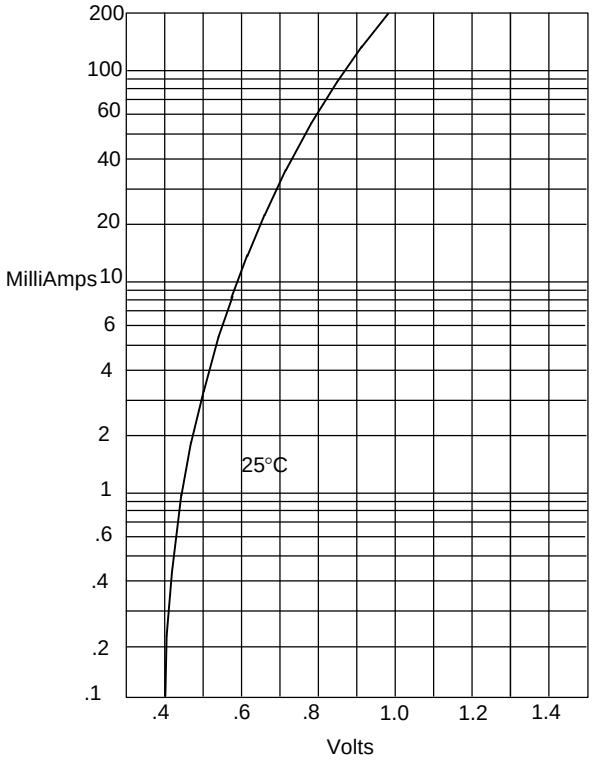
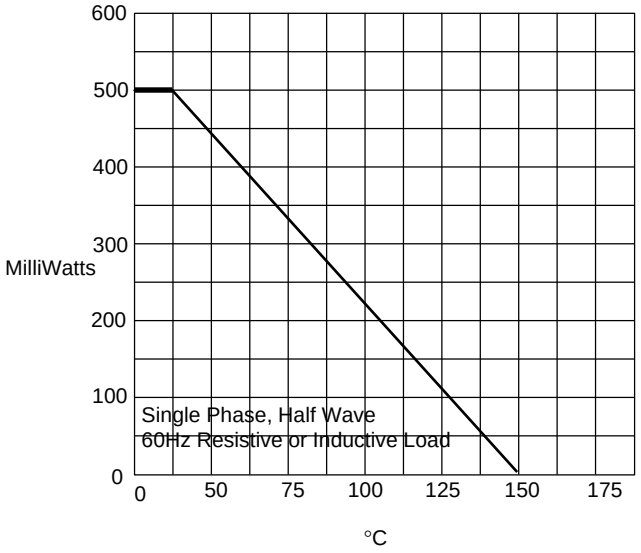


Figure 1
Typical Forward Characteristics



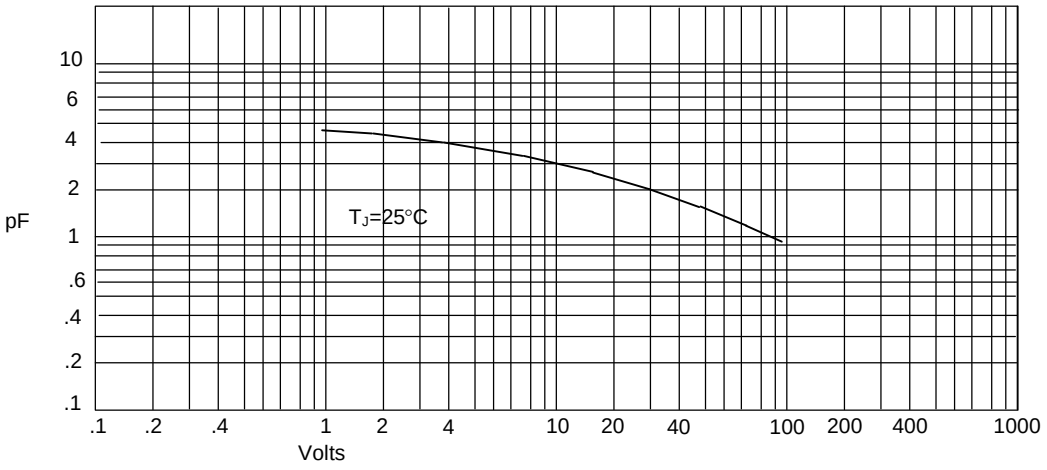

Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



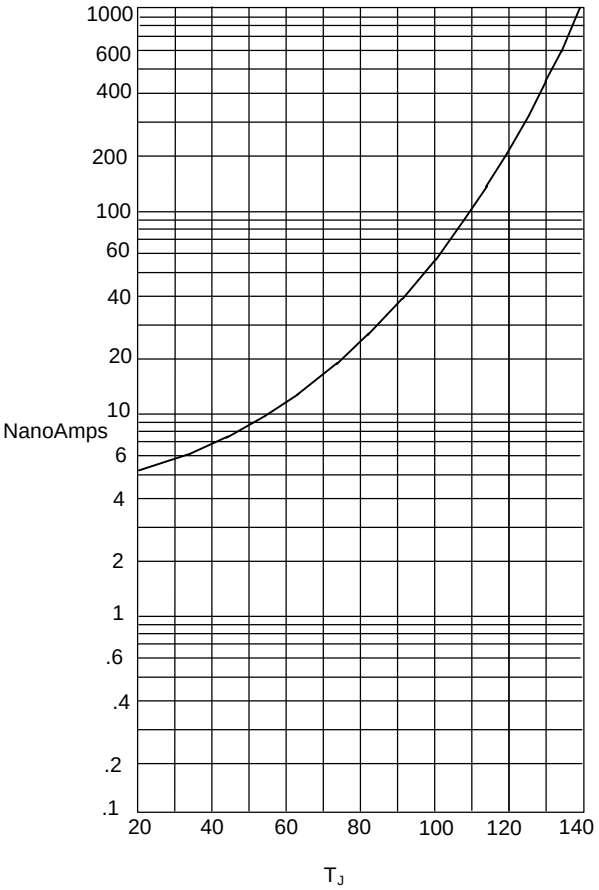

Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature -°C

Figure 3
Junction Capacitance



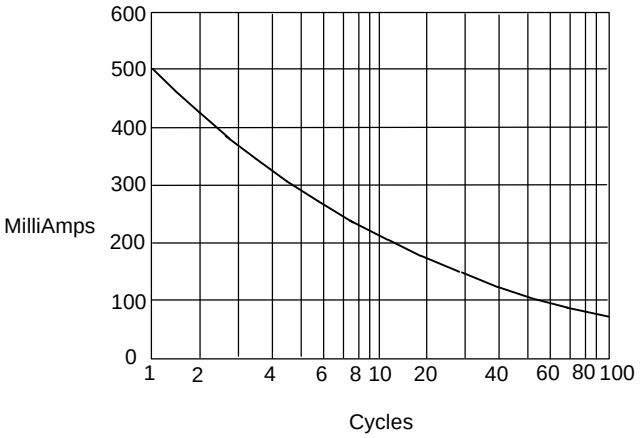

Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics




Instantaneous Reverse Leakage Current - NanoAmperes *versus*
Junction Temperature -°C

Figure 5
Peak Forward Surge Current




Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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