

**Microsemi Corp.**  
The diode experts



**1N6073  
thru  
1N6081**

SANTA ANA, CA

For more information call:  
(714) 979-8220

## FEATURES

- Triple layer passivation.
- Metallurgically bonded.
- Ultra fast recovery.
- Voidless hermetically sealed glass package.
- JAN/TX/TXV available for 1N6074, 1N6075 per MIL-S-19500/503.

## MAXIMUM RATINGS

Operating Temperature:  $-65^{\circ}\text{C}$  to  $+155^{\circ}\text{C}$ .

Storage Temperature:  $-65^{\circ}\text{C}$  to  $+155^{\circ}\text{C}$ .

## ELECTRICAL CHARACTERISTICS

(@  $25^{\circ}\text{C}$  unless otherwise specified)

| TYPE   | PEAK<br>INVERSE<br>VOLTAGE<br>PIV | FORWARD<br>VOLTAGE<br>$V_F$<br>(PULSED) | AVERAGE<br>RECTIFIED<br>CURRENT<br>$I_R$ | REVERSE<br>CURRENT<br>@ PIV<br>$I_R$ | REVERSE*<br>RECOVERY<br>TIME<br>$t_{rr}$ | SURGE<br>CURRENT<br>$I_F$ (SURGE) |
|--------|-----------------------------------|-----------------------------------------|------------------------------------------|--------------------------------------|------------------------------------------|-----------------------------------|
|        | VOLTS                             | VOLTS                                   | AMPS                                     | $\mu\text{A}$                        | ns                                       | AMPS                              |
| 1N6073 | 50                                | 2.04                                    | 3.0                                      | 1.0                                  | 30                                       | 35                                |
| 1N6074 | 100                               | 2.04                                    | 3.0                                      | 1.0                                  | 30                                       | 35                                |
| 1N6075 | 150                               | 2.04                                    | 3.0                                      | 1.0                                  | 30                                       | 35                                |
| 1N6076 | 50                                | 1.76                                    | 6.0                                      | 5.0                                  | 30                                       | 75                                |
| 1N6077 | 100                               | 1.76                                    | 6.0                                      | 5.0                                  | 30                                       | 75                                |
| 1N6078 | 150                               | 1.76                                    | 6.0                                      | 5.0                                  | 30                                       | 75                                |
| 1N6079 | 50                                | 1.50                                    | 12.0                                     | 10.0                                 | 30                                       | 175                               |
| 1N6080 | 100                               | 1.50                                    | 12.0                                     | 10.0                                 | 30                                       | 175                               |
| 1N6081 | 150                               | 1.50                                    | 12.0                                     | 10.0                                 | 30                                       | 175                               |

\*NOTE:  $I_F = 0.5\text{A}$ ,  $I_R = -1.0\text{A}$  and  $I_{RR} = -0.25\text{A}$

## MECHANICAL CHARACTERISTICS

Case: Hermetically sealed hard glass.

Lead Material: 1N6073-75 — Tinned copper.

1N6076-78 — Tinned copper or silver-clad copper.

1N6079-81 — Tinned copper or silver-clad copper.

Marking: Body painted, alpha numeric.

Polarity: Cathode band.

## ULTRA FAST POWER RECTIFIERS

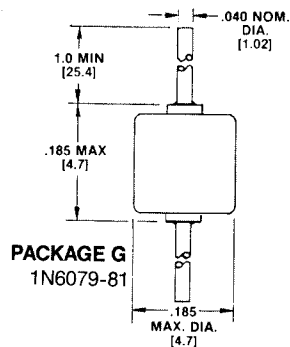
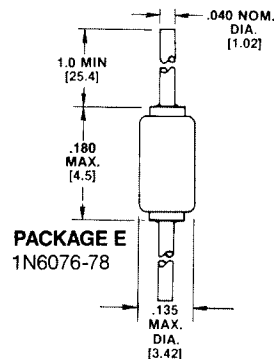
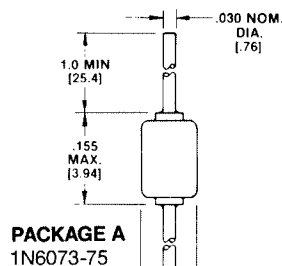


FIGURE 1

# 1N6073 thru 1N6081

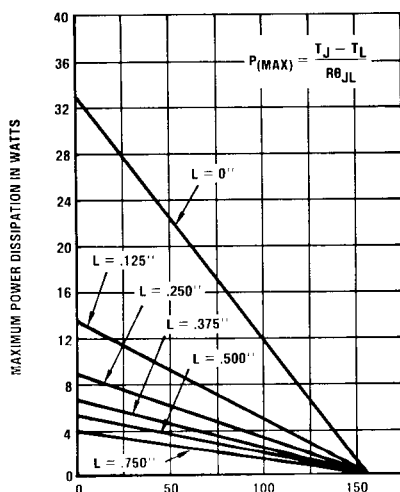


FIGURE 2. Maximum power in watts vs lead temperature for 1N6079, 1N6080 and 1N6081

| L             | $R_{\theta JL}$ |
|---------------|-----------------|
| INCHES (mm)   | °C/W            |
| 0.000         | 5.0             |
| 0.125 ( 3.17) | 11.5            |
| 0.250 ( 6.35) | 17.5            |
| 0.375 ( 9.53) | 23.5            |
| 0.500 (12.70) | 29.0            |
| 0.750 (19.05) | 40.0            |

Maximum lead temperature in °C ( $T_L$ ) at point "L" from body (for maximum operating junction temperature with equal two-lead conditions).

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.

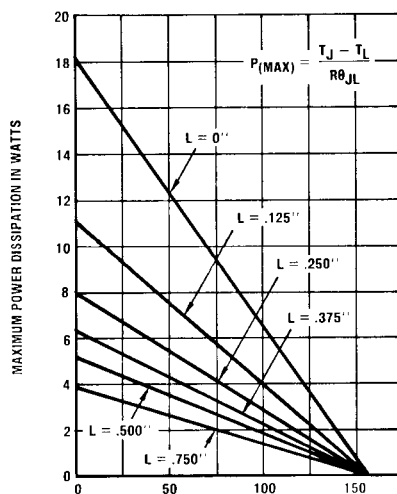


FIGURE 3. Maximum power in watts vs lead temperature for 1N6076, 1N6077 and 1N6078

| L             | $R_{\theta JL}$ |
|---------------|-----------------|
| INCHES (mm)   | °C/W            |
| 0.000         | 8.5             |
| 0.125 ( 3.17) | 14.0            |
| 0.250 ( 6.35) | 19.5            |
| 0.375 ( 9.53) | 25.0            |
| 0.500 (12.70) | 30.0            |
| 0.750 (19.05) | 40.0            |

Maximum lead temperature in °C ( $T_L$ ) at point "L" from body (for maximum operating junction temperature with equal two-lead conditions).

## NOTES:

1. Dimensions are in inches.
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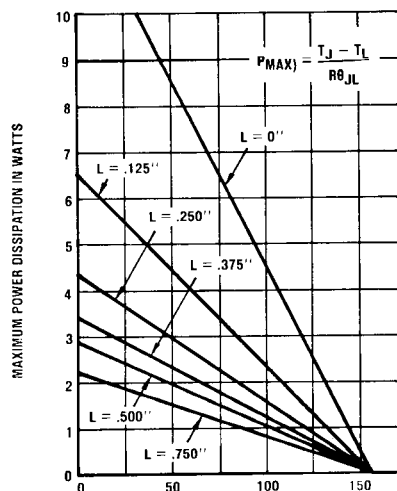


FIGURE 4. Maximum power in watts vs lead temperature for 1N6073, 1N6074 and 1N6075

| L             | $R_{\theta JL}$ |
|---------------|-----------------|
| INCHES (mm)   | °C/W            |
| 0.000         | 13              |
| 0.125 ( 3.17) | 24              |
| 0.250 ( 6.35) | 35              |
| 0.375 ( 9.53) | 46              |
| 0.500 (12.70) | 54              |
| 0.750 (19.05) | 70              |

Maximum lead temperature in °C ( $T_L$ ) at point "L" from body (for maximum operating junction temperature with equal two-lead conditions).

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