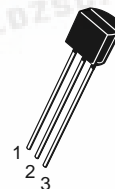
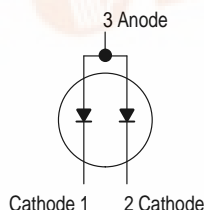


## Dual Diode Common Anode

**MSD6150**



CASE 29-04, STYLE 4  
TO-92 (TO-226AA)

### MAXIMUM RATINGS (EACH DIODE)

| Rating   | Symbol                 | Value       | Unit                       |
|--|------------------------|-------------|----------------------------|
| Reverse Voltage  | $V_R$                  | 70          | Vdc                        |
| Peak Forward Recurrent Current   | $I_F$                  | 200         | mA dc                      |
| Peak Forward Surge Current<br>(Pulse Width = 10 $\mu$ sec)                             | $I_{FM}(\text{surge})$ | 500         | mA dc                      |
| Total Device Dissipation @ $T_A = 25^\circ\text{C}$<br>Derate above $25^\circ\text{C}$ | $P_D^{(1)}$            | 625<br>5.0  | mW<br>mW/ $^\circ\text{C}$ |
| Operating and Storage Junction<br>Temperature Range                                    | $T_J, T_{stg}^{(1)}$   | -55 to +135 | $^\circ\text{C}$           |

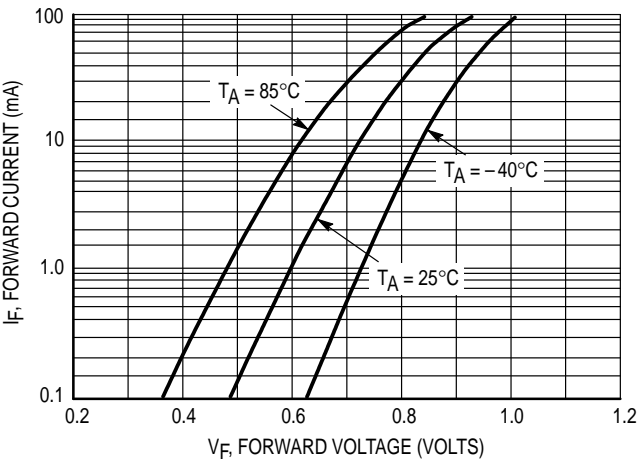
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

| Characteristic   | Symbol     | Min | Typ  | Max | Unit             |
|--|------------|-----|------|-----|------------------|
| Breakdown Voltage<br>( $I_{BR} = 100 \mu\text{A dc}$ )   | $V_{(BR)}$ | 70  | —    | —   | Vdc              |
| Reverse Current<br>( $V_R = 50 \text{ Vdc}$ )  | $I_R$      | —   | —    | 0.1 | $\mu\text{A dc}$ |
| Forward Voltage<br>( $I_F = 10 \text{ mA dc}$ )  | $V_F$      | —   | 0.80 | 1.0 | Vdc              |
| Capacitance<br>( $V_R = 0$ )   | $C$        | —   | 5.0  | 8.0 | pF               |
| Reverse Recovery Time<br>( $I_F = I_R = 10 \text{ mA dc}$ , $V_R = 5.0 \text{ Vdc}$ , $i_{rr} = 1.0 \text{ mA dc}$ ) | $t_{rr}$   | —   | —    | 100 | ns               |

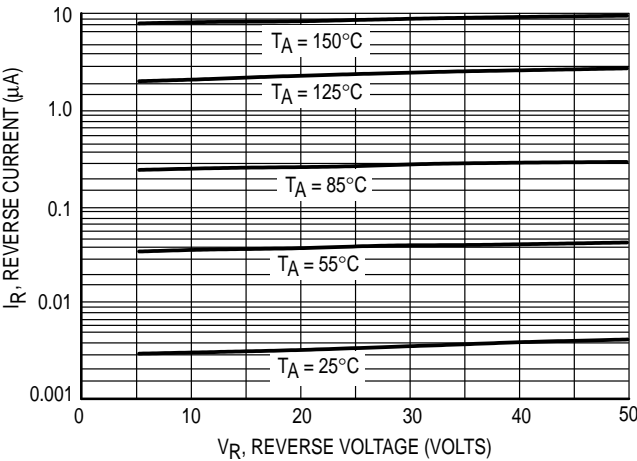
1. Continuous package improvements have enhanced these guaranteed Maximum Ratings as follows:  $P_D = 1.0 \text{ W}$  @  $T_C = 25^\circ\text{C}$ , Derate above  $8.0 \text{ mW}/^\circ\text{C}$ ,  $P_D = 10 \text{ W}$  @  $T_C = 25^\circ\text{C}$ , Derate above  $80 \text{ mW}/^\circ\text{C}$ ,  $T_J, T_{stg} = -55$  to  $+150^\circ\text{C}$ ,  $\theta_{JC} = 12.5^\circ\text{C}/\text{W}$ ,  $\theta_{JA} = 125^\circ\text{C}$ .

**TYPICAL CHARACTERISTICS**

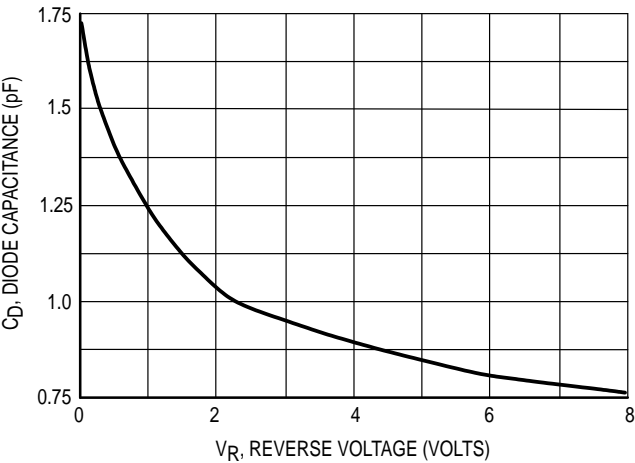
**Curves Applicable to Each Cathode**



**Figure 1. Forward Voltage**

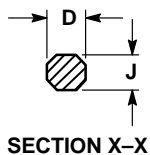
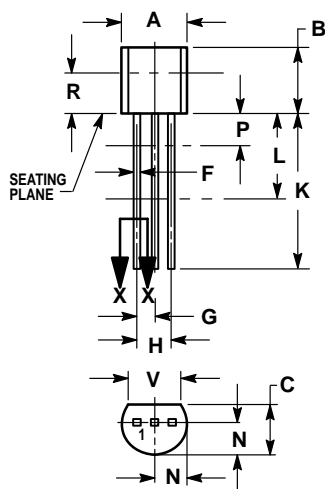


**Figure 2. Leakage Current**



**Figure 3. Capacitance**

## PACKAGE DIMENSIONS



**CASE 029-04  
(TO-226AA)  
ISSUE AD**

## NOTES:


1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. DIMENSION F APPLIES BETWEEN P AND L. DIMENSION D AND J APPLY BETWEEN L AND K MINIMUM. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

| DIM | INCHES |       | MILLIMETERS |      |
|-----|--------|-------|-------------|------|
|     | MIN    | MAX   | MIN         | MAX  |
| A   | 0.175  | 0.205 | 4.45        | 5.20 |
| B   | 0.170  | 0.210 | 4.32        | 5.33 |
| C   | 0.125  | 0.165 | 3.18        | 4.19 |
| D   | 0.016  | 0.022 | 0.41        | 0.55 |
| F   | 0.016  | 0.019 | 0.41        | 0.48 |
| G   | 0.045  | 0.055 | 1.15        | 1.39 |
| H   | 0.095  | 0.105 | 2.42        | 2.66 |
| J   | 0.015  | 0.020 | 0.39        | 0.50 |
| K   | 0.500  | —     | 12.70       | —    |
| L   | 0.250  | —     | 6.35        | —    |
| N   | 0.080  | 0.105 | 2.04        | 2.66 |
| P   | —      | 0.100 | —           | 2.54 |
| R   | 0.115  | —     | 2.93        | —    |
| V   | 0.135  | —     | 3.43        | —    |

## STYLE 4:

- PIN 1. CATHODE
- CATHODE
- ANODE

## MSD6150

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