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# BAY72



**DO-35**

Color Band Denotes Cathode

## Small Signal Diode

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol      | Parameter                                                                                              | Value       | Units            |
|-------------|--------------------------------------------------------------------------------------------------------|-------------|------------------|
| $V_{RRM}$   | Maximum Repetitive Reverse Voltage                                                                     | 125         | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current                                                                      | 200         | mA               |
| $I_{FSM}$   | Non-repetitive Peak Forward Surge Current<br>Pulse Width = 1.0 second<br>Pulse Width = 1.0 microsecond | 1.0<br>4.0  | A<br>A           |
| $T_{stg}$   | Storage Temperature Range                                                                              | -65 to +200 | $^\circ\text{C}$ |
| $T_J$       | Operating Junction Temperature                                                                         | 175         | $^\circ\text{C}$ |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

#### NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

## Thermal Characteristics

| Symbol          | Parameter                               | Value | Units              |
|-----------------|-----------------------------------------|-------|--------------------|
| $P_D$           | Power Dissipation                       | 500   | mW                 |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 300   | $^\circ\text{C/W}$ |

## Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol    | Parameter             | Test Conditions                                                                                    | Min                          | Max                         | Units               |
|-----------|-----------------------|----------------------------------------------------------------------------------------------------|------------------------------|-----------------------------|---------------------|
| $V_R$     | Breakdown Voltage     | $I_R = 100 \mu\text{A}$                                                                            | 125                          |                             | V                   |
| $V_F$     | Forward Voltage       | $I_F = 1.0 \text{ mA}$<br>$I_F = 10 \text{ mA}$<br>$I_F = 50 \text{ mA}$<br>$I_F = 100 \text{ mA}$ | 0.51<br>0.63<br>0.73<br>0.78 | 0.64<br>0.78<br>0.92<br>1.0 | V<br>V<br>V<br>V    |
| $I_R$     | Reverse Current       | $V_R = 100 \text{ V}$<br>$V_R = 100 \text{ V}, T_A = 125^\circ\text{C}$                            |                              | 100<br>100                  | nA<br>$\mu\text{A}$ |
| $C_T$     | Total Capacitance     | $V_R = 0, f = 1.0 \text{ MHz}$                                                                     |                              | 5                           | pF                  |
| $t_{rr1}$ | Reverse Recovery Time | $I_F = I_R = 30 \text{ mA}, I_{rr} = 1.0 \text{ mA}$                                               |                              | 50                          | ns                  |
| $t_{rr2}$ | Reverse Recovery Time | $I_F = 30 \text{ mA}, V_R = 35 \text{ V}$                                                          |                              | 400                         | ns                  |

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