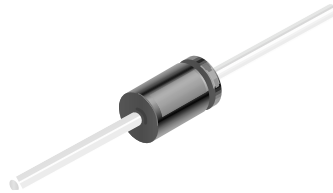


# BAY72



**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         | A                |
|             |  | 4.0         | 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       | $I_F = 1.0 \text{ mA}$                               | 0.51 | 0.64 | V             |
|           |                       | $I_F = 10 \text{ mA}$                                | 0.63 | 0.78 | V             |
|           |                       | $I_F = 50 \text{ mA}$                                | 0.73 | 0.92 | V             |
|           |                       | $I_F = 100 \text{ mA}$                               | 0.78 | 1.0  | V             |
| $I_R$     | Reverse Current       | $V_R = 100 \text{ V}$                                |      | 100  | nA            |
|           |                       | $V_R = 100 \text{ V}; T_A = 125^\circ\text{C}$       |      | 100  | $\mu\text{A}$ |
| $C_T$     | 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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