FAIRCHILD
A Schlumberger Company

# BAW75/BAW76 T-23-05

## High Speed Computer Diodes

- $t_{rr}$...4 ns (max)
- C...4 pf (max)

**PACKAGES**

| | |
|---|---|
| BAW75 | DO-35 |
| BAW76 | DO-35 |

**ABSOLUTE MAXIMUM RATINGS** (Note 1)

**Temperatures**

| | |
|---|---|
| Storage Temperature Range | −65°C to +200°C |
| Maximum Junction Operating Temperature | +175°C |
| Lead Temperature | +260°C |

**Power Dissipation** (Note 2)

| | |
|---|---|
| Maximum Total Power Dissipation at 25°C Ambient | 500 mW |
| Linear Power Derating Factor (from 25°C) | 3.33 mW/°C |

**Maximum Voltage and Currents**

| | | | |
|---|---|---|---|
| WIV | Working Inverse Voltage | BAW 75 | 25V |
| | | BAW 76 | 50V |
| $I_O$ | Average Rectified Current | | 100 mA |
| $I_F$ | Continuous Forward Current | | 300 mA |
| $i_f$ | Peak Repetitive Forward Current | | 400 mA |
| $i_{f\ (surge)}$ | Peak Forward Surge Current | | |
| | Pulse Width = 1 s | | 1.0 A |
| | Pulse Width = 1 μs | | 4.0 A |

**ELECTRICAL CHARACTERISTICS** (25°C Ambient Temperature unless otherwise noted)

| SYMBOL | CHARACTERISTIC | BAW 75 | | BAW 76 | | UNITS | TEST CONDITIONS |
|---|---|---|---|---|---|---|---|
| | | MIN | MAX | MIN | MAX | | |
| $V_F$ | Forward Voltage | | 1.0 | | | V | $I_F$ = 30 mA |
| | | | | | 1.0 | V | $I_F$ = 100 mA |
| $I_R$ | Reverse Current | | 100 | | | nA | $V_R$ = 25 V |
| | | | | | 100 | nA | $V_R$ = 50 V |
| | | | 100 | | | μA | $V_R$ = 25 V, $T_A$ = 150°C |
| | | | | | 100 | μA | $V_R$ = 50 V, $T_A$ = 150°C |
| $B_V$ | Breakdown Voltage | 35 | | 75 | | V | $I_R$ = 5.0 μA |
| C | Capacitance | | 4.0 | | 2.0 | pf | $V_R$ = 0, f = 1 MHz |
| $t_{rr}$ | Reverse Recovery Time | | 4.0 | | 4.0 | ns | $I_f$ = $I_r$ = 10 mA |
| | | | | | | | Recovery to 1 mA |
| | | | 2.0 | | 2.0 | ns | $I_f$ = 10 mA, $V_R$ = 6 V, |
| | | | | | | | $R_L$ = 100 Ω |

NOTES:
1. These ratings are limiting values above which the serviceability of the diode may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty-cycle operation.
3. For product family characteristic curves, refer to Chapter 4, D4.