

## FAST SWITCHING DIODES

**BAV16WS THRU 1N4148WS**

**VOLTAGE RANGE  
CURRENT**

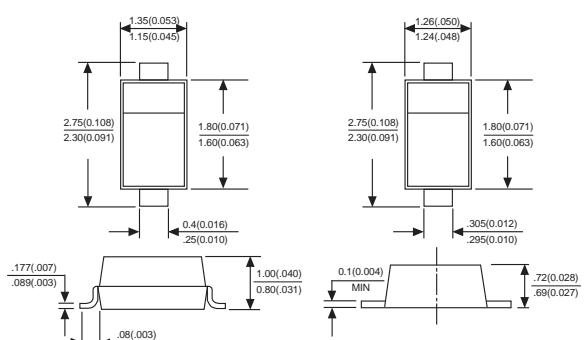
**75 Volts  
1.0 Ampere**

### FEATURES

- Fast switching speed
- Surface mount package ideally suited for automatic insertion
- For general purpose switching applications
- High conductance

### MECHANICAL DATA

- Case : Molded plastic body
- Terminals : Plated leads solderable per MIL-STD-750, Method 2026
- Polarity : Polarity symbols marked on case  
Marking : T4



Dimensions in millimeters and (inches)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Maximum ratings and electrical characteristics, Single diode @  $T_A=25^\circ C$

| PARAMETER                                     | SYMBOLS         | Limits      |  |  | UNITS |
|-----------------------------------------------|-----------------|-------------|--|--|-------|
| Peak repetitive peak reverse voltage          | $V_{RRM}$       |             |  |  |       |
| Working peak reverse voltage                  | $V_{RWM}$       | 75          |  |  | V     |
| DC Blocking voltage                           | $V_R$           |             |  |  |       |
| RMS Reverse voltage                           | $V_{R(RMS)}$    | 53          |  |  | V     |
| Forward continuous current                    | $I_{FM}$        | 300         |  |  | mA    |
| Average rectified output current              | $I_o$           | 150         |  |  | mA    |
| Peak forward current @ $t=1.0^*s$<br>$t=1.0s$ | $I_{FSM}$       | 2.0<br>1.0  |  |  | A     |
| Power dissipation                             | $P_d$           | 200         |  |  | mW    |
| Thermal resistance junction to ambient        | $R_{\Theta JA}$ | 625         |  |  | K/W   |
| Junction temperature                          | $T_j$           | 125         |  |  | °C    |
| Storage temperature                           | $T_{STG}$       | -65 to +150 |  |  | °C    |
| Non-Repetitive peak reverse voltage           | $V_{RM}$        | 100         |  |  | V     |

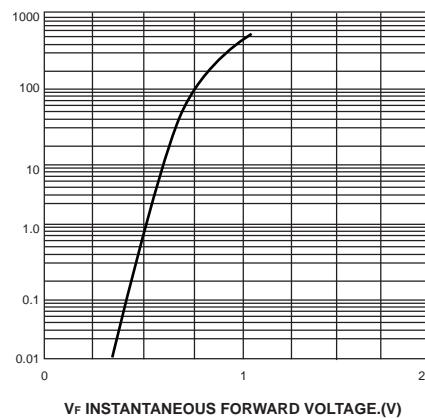
- Electrical ratings @  $T_A=25^\circ C$

| PARAMETER                     | SYMBOLS  | Min. | Typ. | Max.         | Unit | Conditions                                         |
|-------------------------------|----------|------|------|--------------|------|----------------------------------------------------|
| Froward voltage               | $V_{F1}$ |      |      | <b>0.715</b> | V    | $I_F=1.0mA$                                        |
|                               | $V_{F2}$ |      |      | <b>0.855</b> | V    | $I_F=10mA$                                         |
|                               | $V_{F3}$ |      |      | <b>1.0</b>   | V    | $I_F=50mA$                                         |
|                               | $V_{F4}$ |      |      | <b>1.25</b>  | V    | $I_F=150mA$                                        |
| Reverse current               | $I_{R1}$ |      |      | <b>1</b>     | uA   | $V_R=75V$                                          |
|                               | $I_{R2}$ |      |      | <b>25</b>    | nA   | $V_R=20V$                                          |
| Capacitance between terminals | $C_T$    |      |      | <b>2</b>     | pF   | $V_R=0V, f=1.0MHz$                                 |
| Reverse recovery time         | $t_{rr}$ |      |      | <b>4</b>     | ns   | $I_F=I_R=10mA$<br>$I_{rr}=0.1X I_R, R_L=100\Omega$ |

BAV16WS THRU 1N4148WS

VOLTAGE RANGE  
CURRENT75 Volts  
1.0 AmpereI<sub>F</sub>,INSTANTANEOUS FORWARD CURRENT(mA)

FIG. 1- FORWARD CHARACTERISTICS

I<sub>R</sub>, LEAKAGE CURRENT VS JUNCTION TEMPERATURE