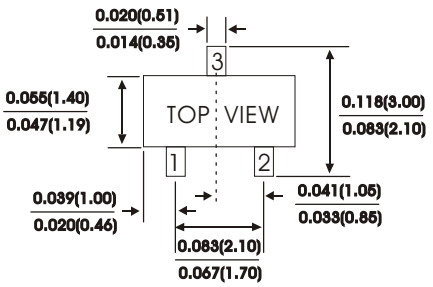
# BAS16 THRU BAV99

SMALL SIGNAL SCHOTTKY BARRIER DIODES

## FEATURES:

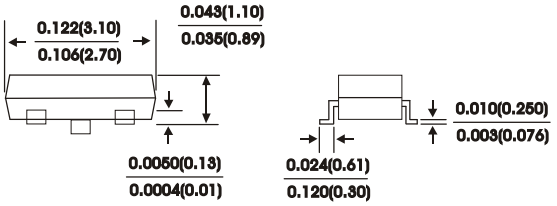
- **Low current leakage**
  **Low forward voltage**
- **Small outline surface mount SOT-23 PACKAGE**

**SOT-23**




## MECHANICAL DATA

**Case : SOT-23 molded plastic**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temperature unless otherwise specified.
Single phase half wave, 60 Hz resistive or inductive load.
For capacitive load. derate current by 20%.

| Characteristic | Symbol | BAS16 | BAV70 | BAW56 | BAV99 | Units |
|---|---|---|---|---|---|---|
| Reverse voltage | $V_R$ | 75 | 70 | 70 | 70 | Volts |
| Minimum reverse voltage at $I_{BR}$-100uAdc | $V_{RM}$ | 75 | 70 | | | Volts |
| Maximum average forward rectified current | $I_{(AV)}$ | 0.2 | | | 0.215 | Amps |
| Non- repetitive peak forward current at 1s (Per leg) | $I_{FSM}$ | 0.5 | | | | Amps |
| Maximum instantaneous forward voltage (Per leg) IF=1.0mA | $V_F$ | 0.715 | | | | Volts |
| IF=10mA | | 0.855 | | | | |
| IF=50mA | | 1.000 | | | | |
| IF=150mA | | 1.250 | | | | |
| Maximum reverse current at (Per leg) $V_R$=75V / 25℃ | $I_R$ | 1.0 | 2.5 | 2.5 | 2.5 | μA |
| $V_R$=70V / 25℃ | | 30 | 60 | 30 | 30 | |
| $V_R$=25V / 150℃ | | 50 | 100 | 50 | 50 | |
| $V_R$=75V / 150℃ | | | | | | |
| Maximum reverse recover time (NOTE 1) (Per leg) | $T_{RR}$ | 6.0 | | | | nS |
| Maximum diode capactitance (NOTE 2) | $C_D$ | 2.0 | 1.5 | 2.0 | 1.5 | $P_F$ |
| Operating and storage temperature range | $T_J$ , $T_{Stg}$ | -55to+150 | | | | ℃ |

NOTES:
(1)Reverse Recovery Test CONDITION : $I_F$=$I_R$=10mA, $I_{R(REC)}$ =1.0mA, $V_R$=5.0V
(2)Measured at 1MHZ and reverse Voltage of 0.0V

Device Marking

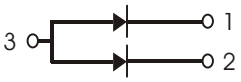
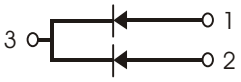
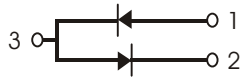
| Item | Marking | Eqivalent Circuit diagram |
|---|---|---|
| BAS16 | A6,D2 |  |
| BAW56 | A1 |  |
| BAV70 | A4,5B |  |
| BAV99 | A7 |  |

FIG.1 - TYPICAL REVERSE CHARACTERISTICS

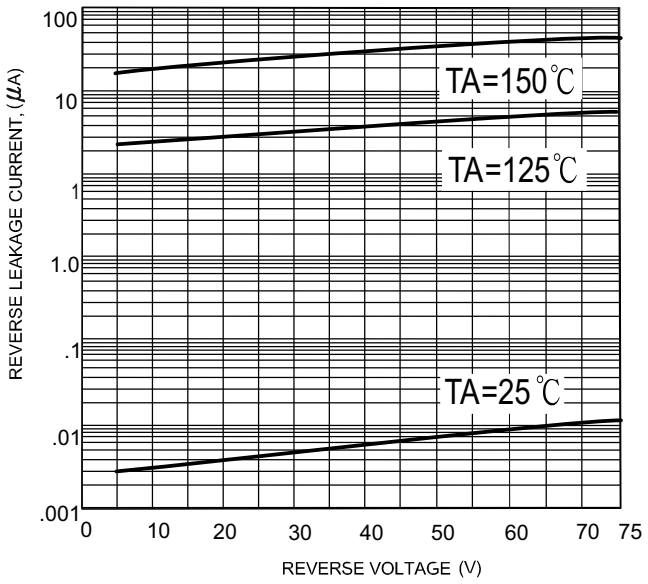



FIG.2 - TYPICAL FORWARD CHARACTERISTICS

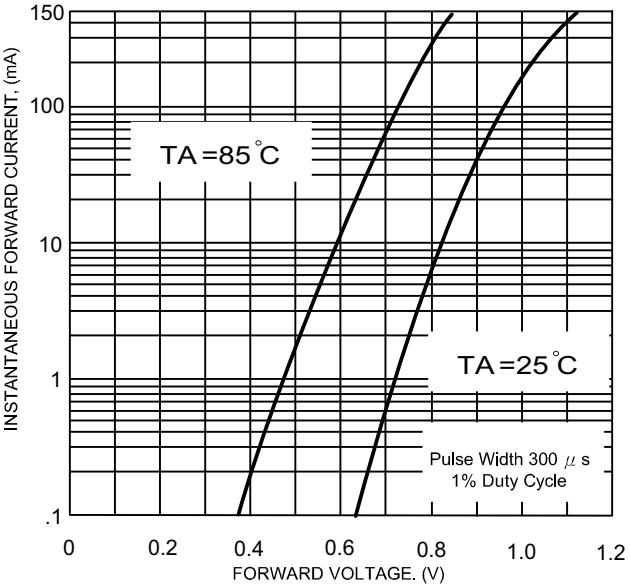



FIG.3 - TYPICAL CAPACITANCE

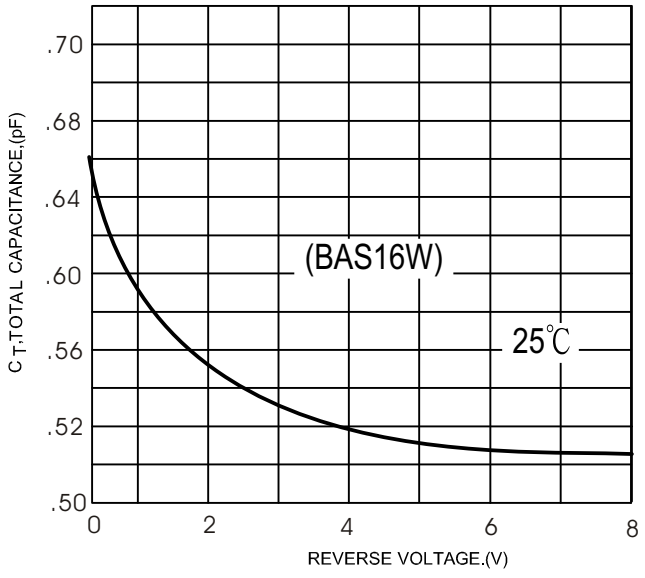



FIG.4 - TYPICAL CAPACITANCE

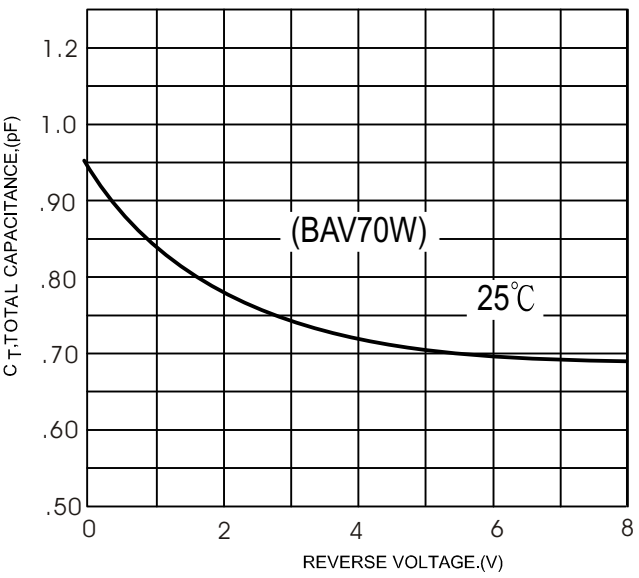


FIG.5- TYPICAL CAPACITANCE

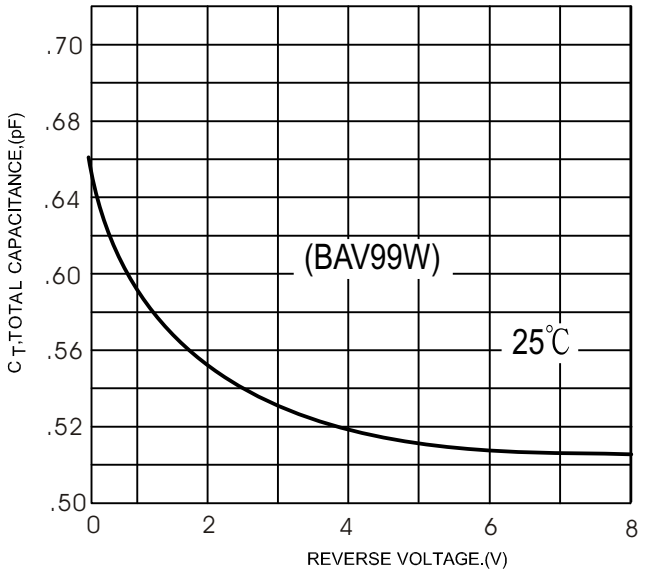



FIG.6- TYPICAL CAPACITANCE

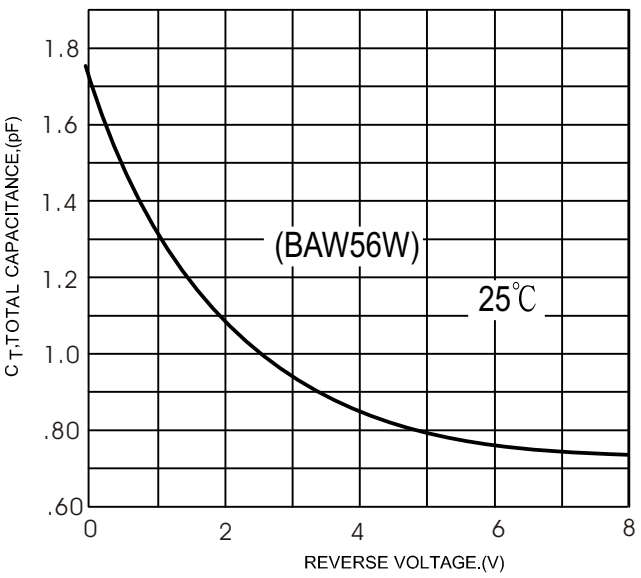
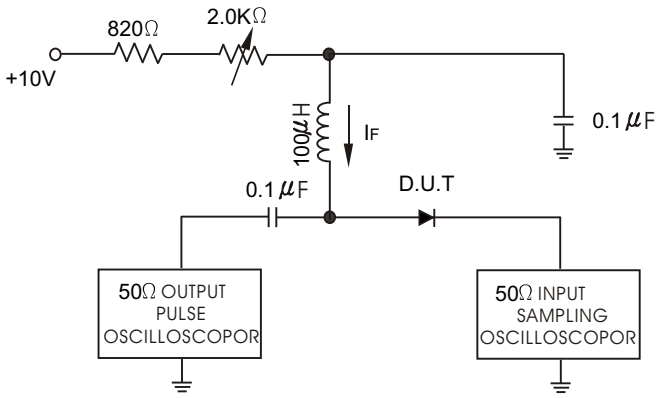
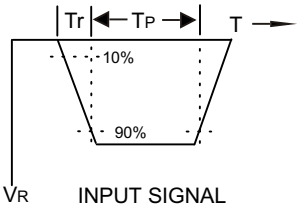
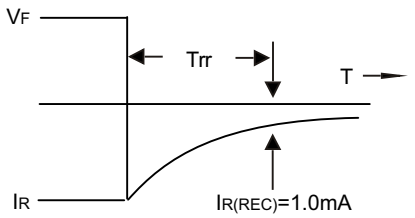



Figure 7 Recovery Test equivalent Circuit




NOTES : 1.A 2.0K Variable resistor for forward current ($I_F$) of 10mA
2.Input pules is adjusted so $I_{R(peak)}$ is equal to 10mA
3.tp" trr




OUTPUT PULSE

($I_F$=$I_R$=10mA, MEASURED at $I_{R(REC)}$=1.0mA)