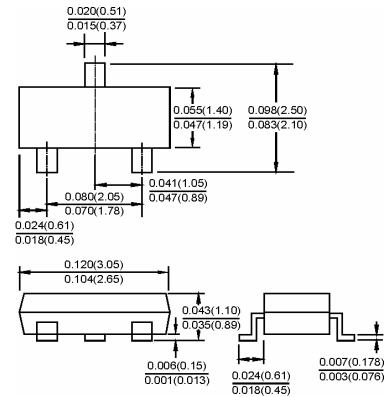


SOT-23



Dimensions in inches and (millimeters)

Features

- ✧ Fast switching speed Max:6ns
- ✧ High conductance
- ✧ Connected in series
- ✧ Surface mount package ideally suited for automatic insertion

Applications

- ✧ Small signal switching

Ordering Information

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| BAV99 | A 7 | SOT-23 |

MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Value | Unit |
|--|-----------------|------------|------|
| Repetitive peak reverse voltage | V_{RRM} | 85 | V |
| Continuous Reverse voltage | V_R | 75 | V |
| Peak forward surge current @t=1.0μs | I_{FSM} | 4 | A |
| @t=1.0ms | | 1 | |
| @t=1.0s | | 0.5 | |
| Forward continuous current single diode loaded | I_F | 215 | mA |
| double diodes loaded | | 125 | |
| Non-Repetitive peak forward current | I_{FRM} | 450 | mA |
| Power dissipation | P_d | 250 | mW |
| Thermal resistance junction to ambient air | $R_{\theta JA}$ | 500 | °C/W |
| Operating and storage temperature range | T_j, T_{STG} | -65 to 150 | °C |

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|---------------------------------|------------|---|-----|------|---------|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R=2.5\mu A$ | 75 | | V |
| Reverse voltage leakage current | I_R | $V_R=25V$ | | 35 | nA |
| | | $V_R=75V$ | | 1 | μA |
| | | $V_R=25V T_j=150^\circ C$ | | 30 | μA |
| | | $V_R=75V T_j=150^\circ C$ | | 50 | μA |
| Forward voltage | V_F | $I_F=1mA$ | | 715 | mV |
| | | $I_F=10mA$ | | 855 | |
| | | $I_F=50mA$ | | 1000 | |
| | | $I_F=150mA$ | | 1250 | |
| Diode capacitance | C_D | $V_R=0V f=1MHz$ | | 1.5 | pF |
| Reverse recovery time | t_{rr} | $I_F=I_R=10mA,$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | 6 | nS |

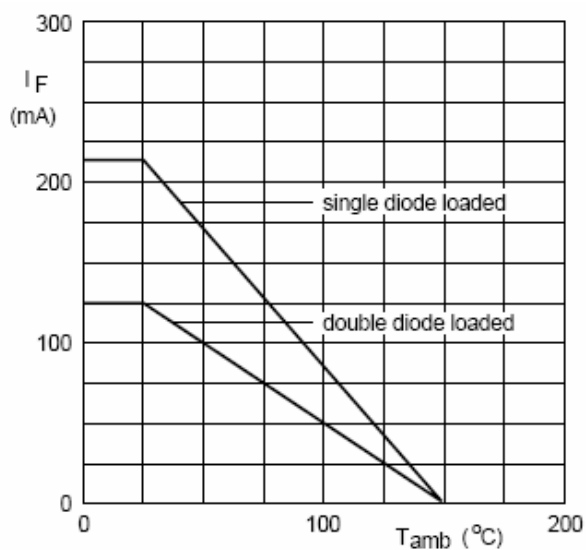
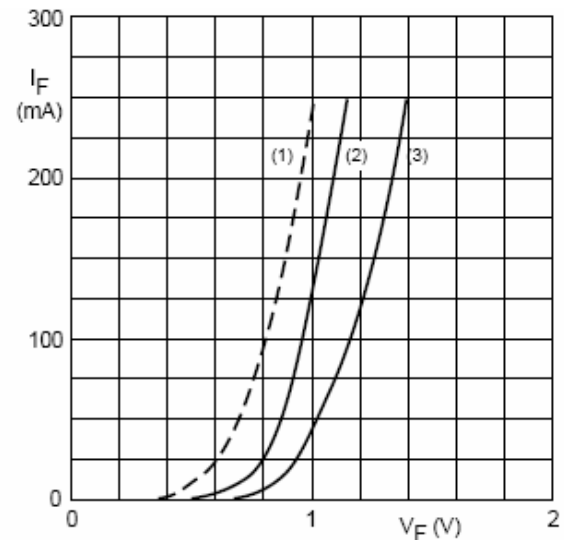
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified


Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



- (1) $T_j = 150^\circ C$; typical values.
- (2) $T_j = 25^\circ C$; typical values.
- (3) $T_j = 25^\circ C$; maximum values.

Fig.3 Forward current as a function of forward voltage.

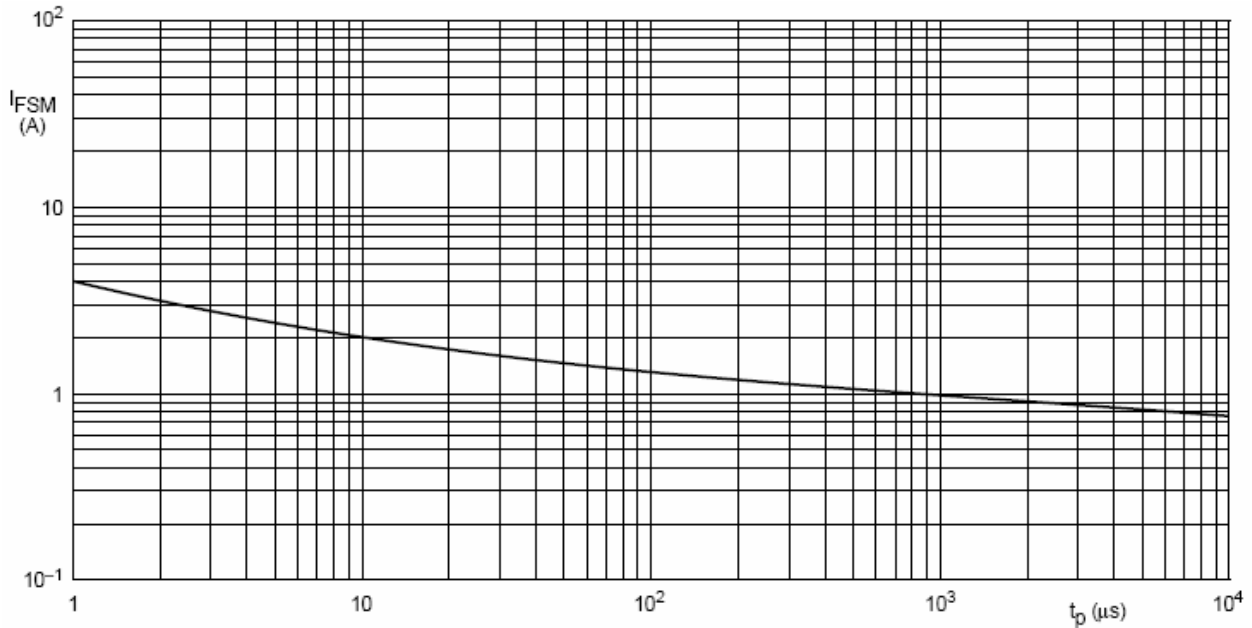


Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

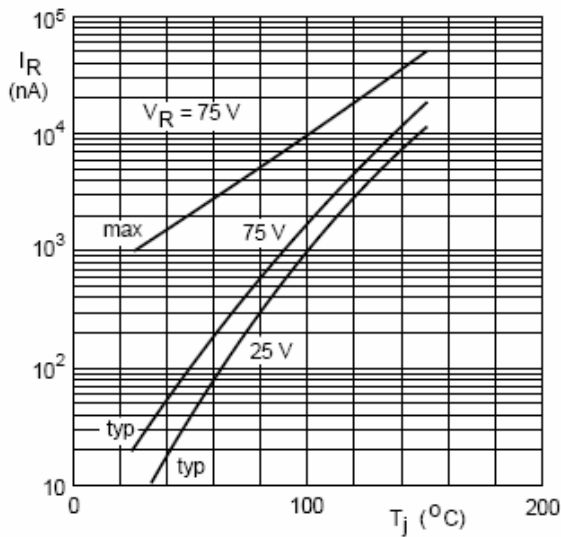


Fig.5 Reverse current as a function of junction temperature.

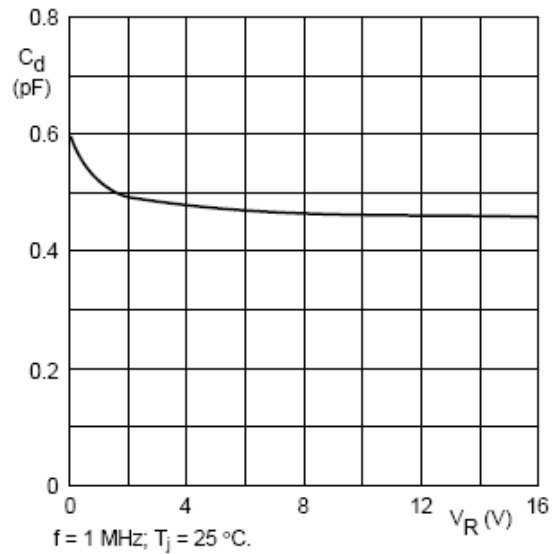


Fig.6 Diode capacitance as a function of reverse voltage; typical values.

| PACKAGE | SPQ/PCS | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| SOT-23 | 3000/REEL | 90000 | 40X20X22 | 5.00 | 4.00 |

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