Elektronische Bauelemente

# BAV99CR-C

**0.215A, 75V**

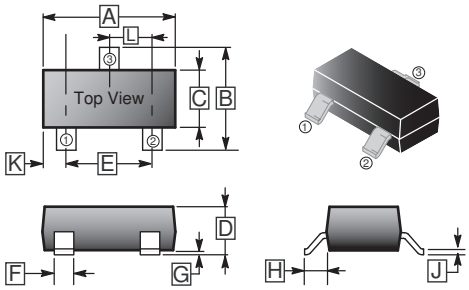
**Surface Mount Switching Diode**

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Fast Switching Speed
- High Conductance
- Connected in Series
- Surface Mount Package Ideally Suited for Automatic Insertion
- Qualified to AEC-Q101 Standards for High Reliability

**SOT-23**




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 2.65 | 3.10 | G | 0 | 0.18 |
| B | 2.10 | 3.00 | H | 0.55 REF. | |
| C | 1.10 | 1.80 | J | 0.05 | 0.26 |
| D | 0 | 1.40 | K | 0.60 REF. | |
| E | 1.70 | 2.30 | L | 0.95 TYP. | |
| F | 0.28 | 0.55 | | | |

## APPLICATIONS

- High-Speed Switching in Thick and Thin-Film Circuits

## MARKING

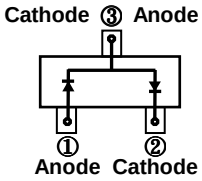
**A7**

## PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---|---|---|
| SOT-23 | 3K | 7 inch |

## ORDER INFORMATION

| Part Number | Type |
|---|---|
| BAV99CR-C | Lead (Pb)-free and Halogen-free |




## ABSOLUTE MAXIMUM RATINGS ($T_A$=25℃ unless otherwise specified)

| Parameter | | Symbol | Ratings | Unit |
|---|---|---|---|---|
| Reverse Voltage | | $V_R$ | 75 | V |
| Forward Current | | $I_F$ | 215 | mA |
| Peak Forward Surge Current | | $I_{FM}$ | 500 | mA |
| Peak Repetitive Reverse Voltage | | $V_{RRM}$ | 75 | V |
| Repetitive Peak Forward Current | | $I_{FRM}$ | 450 | mA |
| Peak Forward Surge Current | T=1us | $I_{FSM}$ | 2 | A |
| | T=1ms | | 1 | |
| | T=1s | | 0.5 | |
| Power Dissipation | | $P_D$ | 350 | mW |
| Thermal Resistance Junction-Ambient | | $R_{\theta JA}$ | 556 | ℃/W |
| Thermal Resistance Junction-Lead | | $R_{\theta JL}$ | 338 | |
| Thermal Resistance Junction-Case | | $R_{\theta JC}$ | 250 | |
| Junction, Storage Temperature | | $T_J$, $T_{STG}$ | -55~150 | ℃ |

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**Surface Mount Switching Diode**

## ELECTRICAL CHARACTERISTICS ($T_A$=25℃ unless otherwise specified)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 75 | - | - | V | $I_R$=2.5μA |
| Leakage Current | $I_R$ | - | - | 25 | nA | $V_R$=20V |
| | | - | - | 2.5 | μA | $V_R$=75V |
| | | - | - | 30 | | $V_R$=25V, $T_J$=150℃ |
| | | - | - | 50 | | $V_R$=75V, $T_J$=150℃ |
| Forward Voltage | $V_F$ | - | - | 715 | mV | $I_F$=1mA |
| | | - | - | 855 | | $I_F$=10mA |
| | | - | - | 1000 | | $I_F$=50mA |
| | | - | - | 1250 | | $I_F$=150mA |
| Diode Capacitance | $C_D$ | - | 2 | - | pF | $V_R$=0, f=1MHz |
| Reverse Recovery Time | $T_{RR}$ | - | 4 | - | nS | $I_F$=$I_R$=10mA, $I_{rr}$=0.1x$I_R$, $R_L$=100Ω |

## RATINGS AND CHARACTERISTIC CURVES

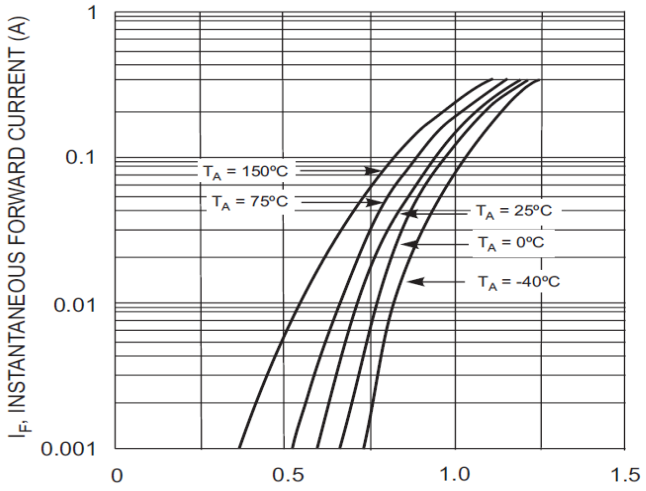


Fig. 1 Forward Characteristics

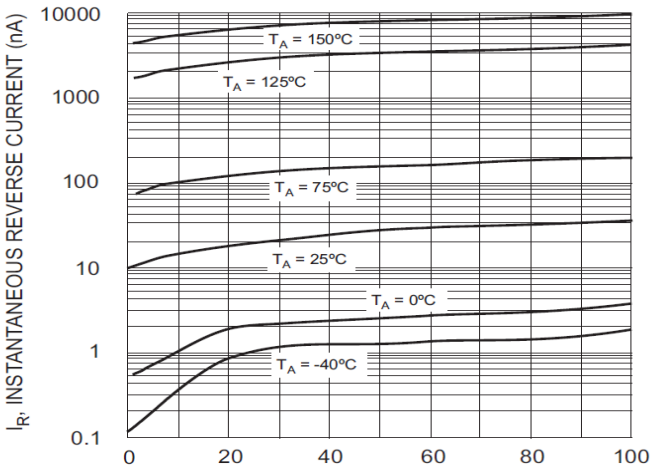


Fig. 2 Typical Reverse Characteristics

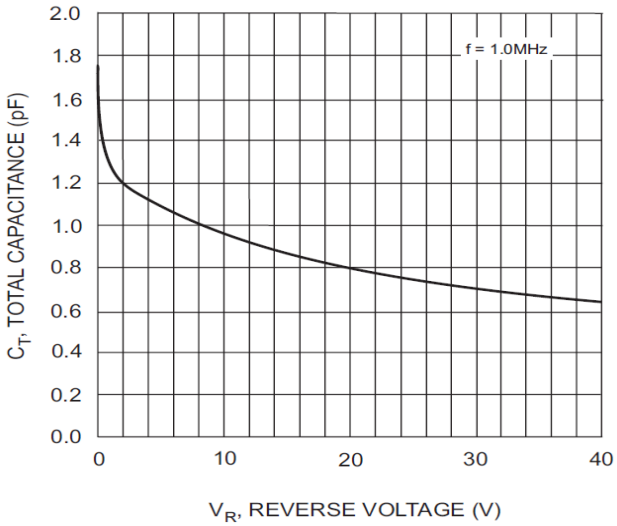


Fig. 3 Typical Capacitance vs. Reverse Voltage