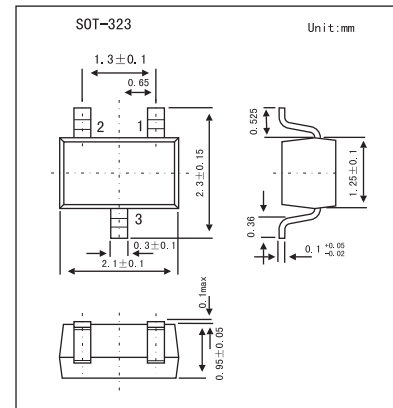
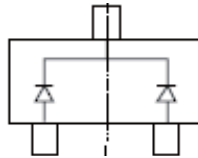


Dual Surface Mount Switching Diode

KAV70W (BAV70W)

■ Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|--|-----------------|-------------|------------------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 100 | V |
| Peak Repetitive Reverse Voltage | V_{RRM} | 75 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 50 | V |
| Average Rectified Output Current | I_o | 150 | mA |
| Forward Continuous Current | I_{FM} | 300 | mA |
| Non-Repetitive Peak Forward Surge Current @ $t = 1.0 \mu\text{s}$ @ $t = 1.0\text{s}$ | I_{FSM} | 2.0 | A |
| | | 1.0 | |
| Power Dissipation | P_d | 200 | mW |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 625 | K/W |
| Operating and Storage Temperature Range | T, T_{STG} | -65 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

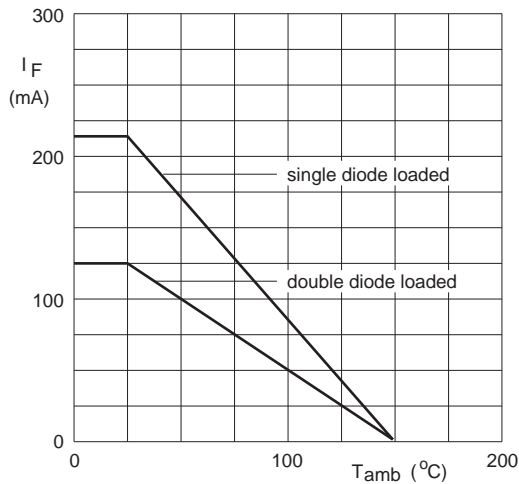
| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|---------------------------|------------|--|-----|-----|-------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_F = 10 \mu\text{A}$ | 75 | | | V |
| Forward Voltage | V_F | $I_F = 1.0\text{mA}$ | | | 0.715 | V |
| | | $I_F = 10\text{mA}$ | | | 0.855 | |
| | | $I_F = 50\text{mA}$ | | | 1.0 | |
| | | $I_F = 150\text{mA}$ | | | 1.25 | |
| Peak Reverse Current | I_{RM} | $V_R = 75\text{V}$ | | | 2.5 | μA |
| | | $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ | | | 50 | μA |
| | | $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ | | | 30 | μA |
| | | $V_R = 20\text{V}$ | | | 25 | nA |
| Junction Capacitance | C_j | $V_R = 0, f = 1.0\text{MHz}$ | | | 2 | pF |
| Reverse Recovery Time | t_r | $I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$ | | | 4 | ns |

■ Marking

| | |
|---------|-----|
| Marking | A4* |
|---------|-----|

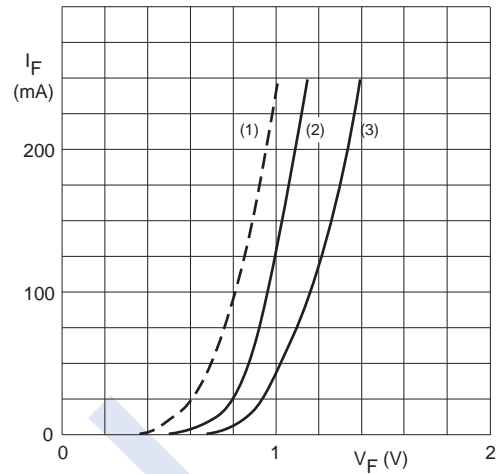
KAV70W (BAV70W)

■ Typical Characteristics



Device mounted on an FR4 printed-circuit board.

Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.



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

Fig.2 Forward current as a function of forward voltage.

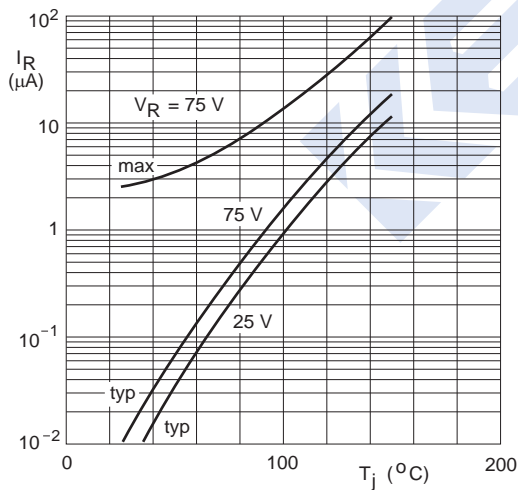
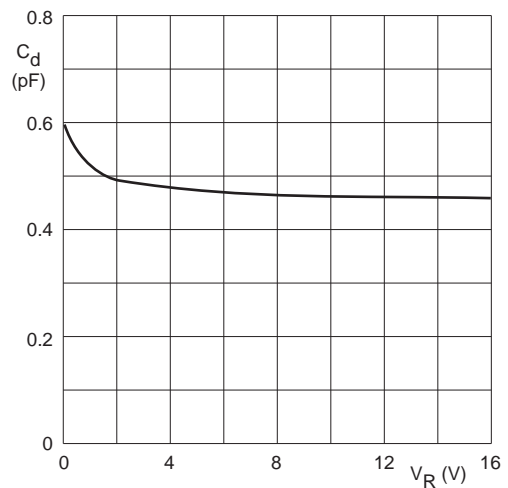


Fig.3 Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$; $T_j = 25^\circ\text{C}$.

Fig.4 Diode capacitance as a function of reverse voltage; typical values.