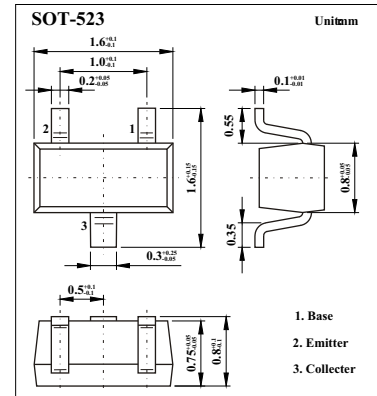
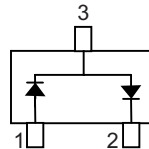


High-Speed Double Diode BAV99T

■ Features

- Small plastic SMD package.
- High switching speed: max.4 ns.
- Repetitive peak forward current: max.450 mA.



■ Absolute Maximum Ratings Ta = 25°C

| Parameter | Symbol | Rating | Unit |
|--|----------------------|-------------|------|
| Repetitive peak reverse voltage | V _{RRM} | 85 | V |
| Continuous reverse voltage | V _R | 75 | V |
| Continuous forward current(single diode loaded *) (double diode loaded *) | I _F | 215 125 | mA |
| Repetitive peak forward current | I _{FRM} | 450 | mA |
| Non-repetitive peak forward current T _j =25 °C t=1 μs | I _{FSM} | 4 | A |
| t=1ms | | 1 | |
| t=1s | | 0.5 | |
| power dissipation * | P _D | 250 | mW |
| Thermal resistance from junction to tie-point | R _{th j-tp} | 360 | K/W |
| Thermal resistance from junction to ambient * | R _{th j-a} | 500 | K/W |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _{stg} | -65 to +150 | °C |

* Device mounted on an FR4 printed-circuit board.

■ Electrical Characteristics Ta = 25°C

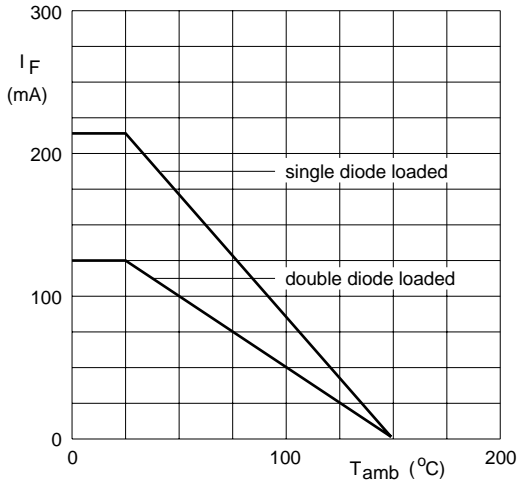
| Parameter | Symbol | Test conditions | Max | Unit |
|--------------------------|-----------------|--|------|------|
| Forward voltage | V _F | I _F = 1 mA | 715 | mV |
| | | I _F = 10 mA | 855 | mV |
| | | I _F = 50 mA | 1 | V |
| | | I _F = 150 mA | 1.25 | V |
| Reverse current | I _R | V _R = 25 V | 30 | nA |
| | | V _R = 75 V | 1 | μA |
| | | V _R = 25 V; T _j = 150 °C | 30 | μA |
| | | V _R = 75 V; T _j = 150 °C | 50 | μA |
| Diode capacitance | C _d | V _R = 0 V, f = 1 MHz | 1.5 | pF |
| Reverse recovery time | t _{rr} | when switched from I _F = 10 mA to I _R = 10 mA; R _L = 100 Ω; measured at I _R = 1 mA | 4 | nS |
| Forward recovery voltage | V _{fr} | I _F = 10 mA, t _r = 20 ns | 1.75 | V |

■ Marking

| | |
|---------|----|
| Marking | C3 |
|---------|----|

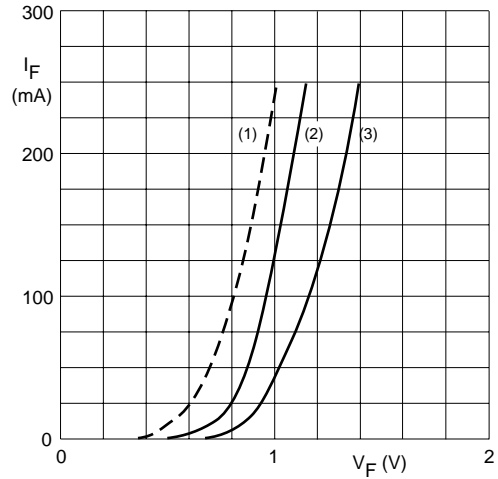
BAV99T

Typical Characteristics



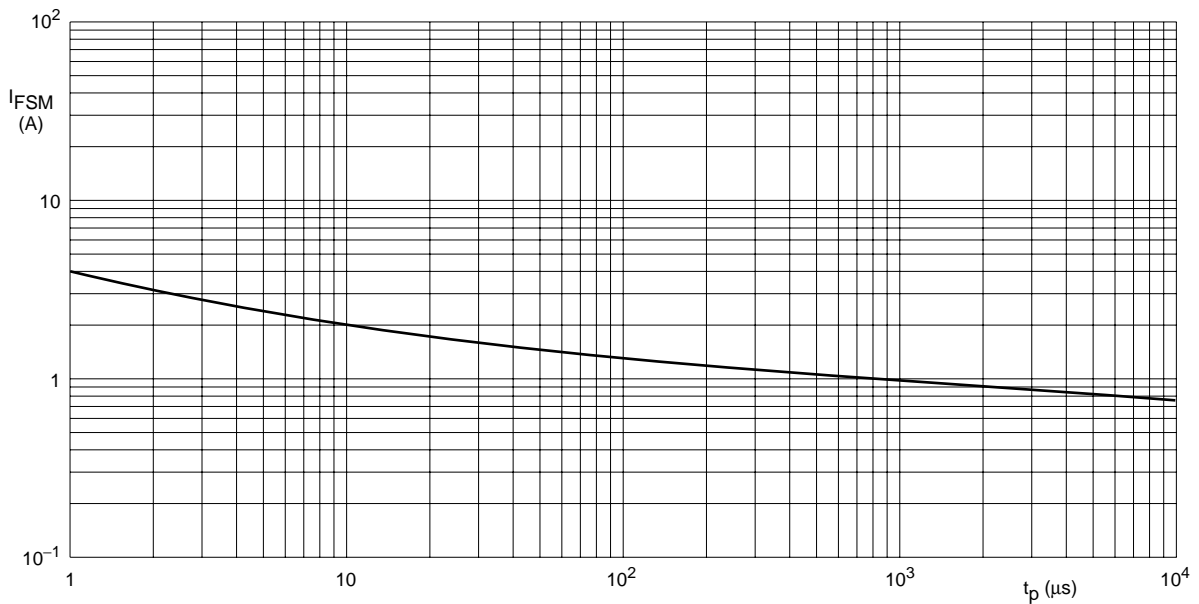
Device mounted on an FR4 printed-circuit board.

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



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

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



Based on square wave currents.
 $T_j = 25$ °C prior to surge.

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

BAV99T

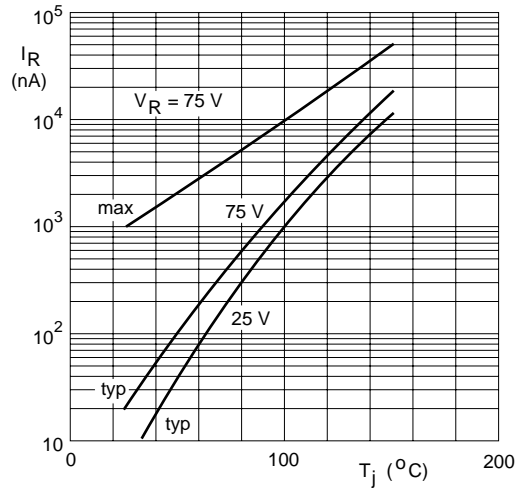
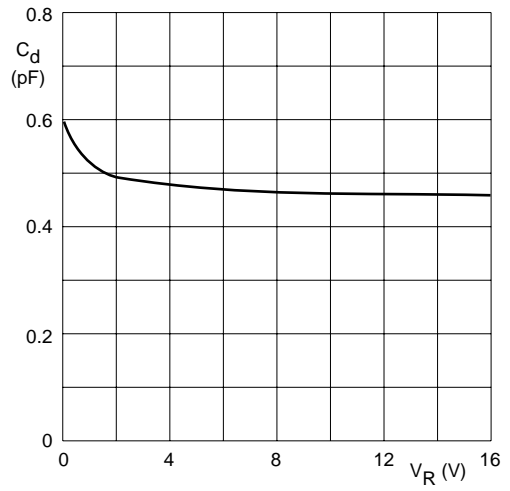


Fig.5 Reverse current as a function of junction temperature.



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

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