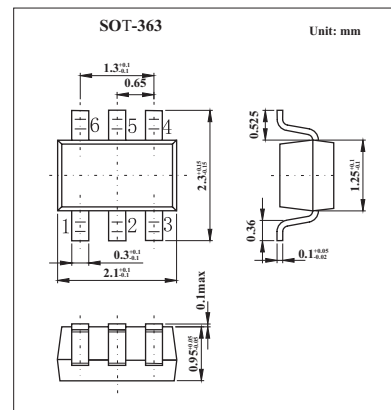


## High-Speed Double Diode Array

## BAV70S



### ■ Features

- Small plastic SMD package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75 V
- Repetitive peak reverse voltage: max. 85 V
- Repetitive peak forward current: max. 450 mA.

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

| Parameter                                   | Symbol        | Conditions  | Min | Max  | Unit             |
|---|---------------|---|-----|------|------------------|
| Per diode                                   |               |   |     |      |                  |
| repetitive peak forward current             | $V_{RRM}$     |   |     | 85   | V                |
| continuous reverse voltage                  | $V_R$         |   |     | 75   | V                |
| continuous forward current                  | $I_F$         | single diode loaded;                                  |     | 250  | mA               |
|   |               | all diodes loaded;                                    |     | 100  | mA               |
| repetitive peak forward current             | $I_{FRM}$     |   |     | 450  | mA               |
| non-repetitive peak forward current         | $I_{FSM}$     | square wave; $T_j = 25^\circ\text{C}$ prior to surge; |     | 4    | A                |
|   |               | $t = 1 \mu\text{s}$                                   |     | 1    |                  |
|   |               | $t = 1 \text{ms}$                                     |     | 0.5  |                  |
| total power dissipation                     | $P_{tot}$     | $T_s = 60^\circ\text{C}$ ; note 1                     |     | 350  | mW               |
| storage temperature                         | $T_{stg}$     |   | -65 | +150 | $^\circ\text{C}$ |
| junction temperature                        | $T_j$         |   | -65 | +150 | $^\circ\text{C}$ |
| thermal resistance from junction to ambient | $R_{th\ j-a}$ |   |     | 255  | K/W              |

Note

1. One or more diodes loaded.

**BAV70S**■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                | Symbol   | Conditions   | Max  | Unit           |
|--------------------------|----------|--|------|----------------|
| forward voltage          | $V_F$    | $I_F = 1\text{ mA}$  | 200  | mV             |
|                          |          | $I_F = 10\text{ mA}$   | 260  |                |
|                          |          | $I_F = 50\text{ mA}$   | 340  |                |
|                          |          | $I_F = 150\text{ mA}$  | 420  |                |
| reverse current          | $I_R$    | $V_R = 25\text{ V}$  | 30   | nA             |
|                          |          | $V_R = 75\text{ V}$  | 2.5  | $\mu\text{ A}$ |
|                          |          | $V_R = 25\text{ V}; T_j = 150^\circ\text{C}$   | 60   | $\mu\text{ A}$ |
|                          |          | $V_R = 75\text{ V}; T_j = 150^\circ\text{C}$   | 100  | $\mu\text{ A}$ |
| diode capacitance        | $C_d$    | $V_R = 0; f = 1\text{ MHz};$   | 1.5  | pF             |
| reverse recovery time    | $t_{rr}$ | when switched from $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA};$<br>$R_L = 100\ \Omega$ ; measured at $I_R = 1\text{ mA};$ | 4    | ns             |
| forward recovery voltage | $V_{fr}$ | when switched from $I_F = 10\text{ mA}; t_r = 20\text{ ns}$  | 1.75 | V              |

## ■ Marking

|         |     |
|---------|-----|
| Marking | A4t |
|---------|-----|