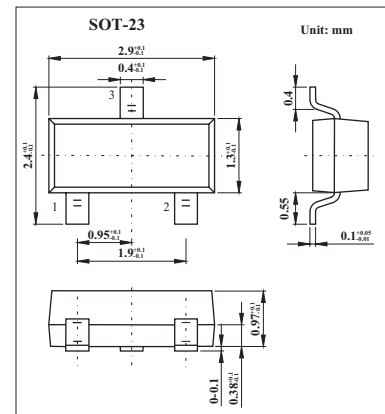


## High-speed diode

## BAS55

## ■ Features

- Small plastic SMD package
- High switching speed: max. 6ns
- Continuous reverse voltage: max. 60 V
- Repetitive peak forward current: max. 600 mA.

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

| Parameter                           | Symbol    | Conditions  | Min | Max           | Unit             |
|-------------------------------------|-----------|---|-----|---------------|------------------|
| Repetitive peak reverse voltage     | $V_{RRM}$ |   |     | 60            | V                |
| Continuous reverse voltage          | $V_R$     |   |     | 60            | V                |
| Continuous forward current          | $I_F$     | Note 1  |     | 250           | mA               |
| Repetitive peak forward current     | $I_{FRM}$ |   |     | 600           | mA               |
| Non-repetitive peak forward current | $I_{FSM}$ | square wave; $T_j = 25^\circ\text{C}$ prior to surge;<br>$t = 1\ \mu\text{s}$<br>$t = 100\ \mu\text{s}$<br>$t = 100\ \text{ms}$ |     | 9<br>3<br>1.7 | A                |
| Total power dissipation             | $P_{tot}$ | $T_{mab} = 25^\circ\text{C}$ ; Note 1   |     | 250           | mW               |
| Storage temperature                 | $T_{stg}$ |   | -65 | +150          | $^\circ\text{C}$ |
| Junction temperature                | $T_j$     |   |     | 150           | $^\circ\text{C}$ |

Note

1. Device mounted on an FR4 printed-circuit board.

## High-speed diode

## BAS55

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

| Parameter                | Symbol   | Conditions   | Max | Unit          |
|--------------------------|----------|--|-----|---------------|
| Forward voltage          | $V_F$    | $I_F = 200\text{ mA}$ ; DC value; Note 1   | 1.0 | V             |
| Reverse current          | $I_R$    | $V_R = 60\text{ V}$ ;  | 100 | nA            |
|                          |          | $V_R = 60\text{ V}$ ; $T_j = 150^\circ\text{C}$  | 100 | $\mu\text{A}$ |
| Diode capacitance        | $C_d$    | $f = 1\text{ MHz}$ ; $V_R = 0$ ;   | 2.5 | pF            |
| Reverse recovery time    | $t_{rr}$ | when switched from $I_F = 400\text{ mA}$ to $I_R = 400\text{ mA}$ ;<br>$R_L = 100\ \Omega$ ;measured at $I_R = 40\text{ mA}$ ; | 6   | ns            |
| Forward recovery voltage | $V_{fr}$ | when switched to $I_F = 400\text{ mA}$ ; $t_r = 30\text{ ns}$ ;  | 2   | V             |
|                          |          | when switched to $I_F = 400\text{ mA}$ ; $t_r = 100\text{ ns}$ ;   | 1.5 |               |

Note

1.  $T_{amb} = 25^\circ\text{C}$ ; device has reached the thermal equilibrium when mounted on an FR4 printed-circuit board.

## ■ Marking

|         |     |
|---------|-----|
| Marking | L5p |
|---------|-----|