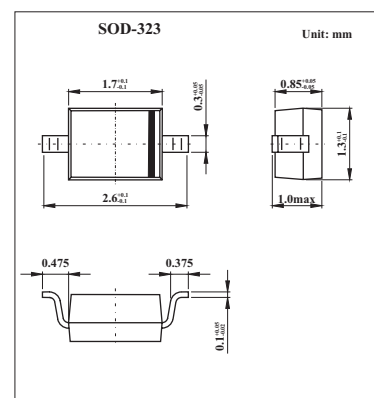


## Band-switching diode

## BA591

## ■ Features

- Very small plastic SMD package
- Low diode capacitance: max. 1.05 pF
- Low diode forward resistance: max. 0.7  $\Omega$
- Small inductance.

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

| Parameter   | Symbol        | Conditions               | Min | Max  | Unit             |
|---|---------------|--------------------------|-----|------|------------------|
| Continuous reverse voltage                          | $V_R$         |                          |     | 30   | V                |
| Continuous forward current                          | $I_F$         |                          |     | 100  | mA               |
| Total power dissipation                             | $P_{tot}$     | $T_s = 90^\circ\text{C}$ |     | 500  | mW               |
| Storage temperature                                 | $T_{stg}$     |                          | -65 | +150 | $^\circ\text{C}$ |
| Junction temperature                                | $T_j$         |                          | -65 | +150 | $^\circ\text{C}$ |
| thermal resistance from junction to soldering point | $R_{th\ j-s}$ |                          |     | 120  | K/W              |

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

| Parameter                | Symbol  | Conditions                                | Typ  | Max  | Unit       |
|--------------------------|---------|---|------|------|------------|
| Forward voltage          | $V_F$   | $I_F = 10\text{ mA}$                      |      | 1    | V          |
| Reverse current          | $I_R$   | $V_R = 20\text{ V}$                       |      | 20   | nA         |
| Diode capacitance        | $C_d$   | $f = 1\text{ MHz}$ ; note 1               |      |      |            |
|                          |         | $V_R = 1\text{ V}$                        | 0.8  | 1.05 | pF         |
|                          |         | $V_R = 3\text{ V}$                        | 0.65 | 0.9  | pF         |
| Diode forward resistance | $r_D$   | $f = 100\text{ MHz}$ ; note 1             |      |      |            |
|                          |         | $I_F = 3\text{ mA}$                       | 0.45 | 0.7  | $\Omega$   |
|                          |         | $I_F = 10\text{ mA}$                      | 0.36 | 0.5  | $\Omega$   |
| Reverse resistance       | $1/g_p$ | $V_R = 1\text{ V}$ ; $f = 100\text{ MHz}$ | 100  |      | K $\Omega$ |
| Series inductance        | $L_s$   |   | 2    |      | nH         |

Note

1. Guaranteed on AQL basis; inspection level S4, AQL 1.0.

## ■ Marking

|         |    |
|---------|----|
| Marking | A1 |
|---------|----|