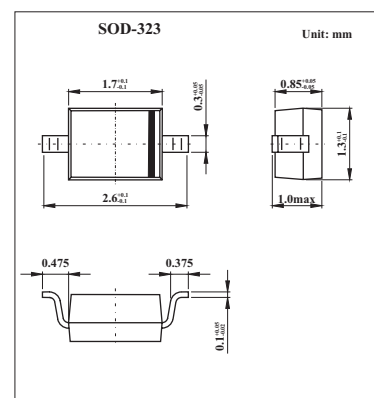


Band-switching diode

BA591

■ Features

- Very small plastic SMD package
- Low diode capacitance: max. 1.05 pF
- Low diode forward resistance: max. 0.7 Ω
- 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 | Ω |
| | | $I_F = 10\text{ mA}$ | 0.36 | 0.5 | Ω |
| Reverse resistance | $1/g_p$ | $V_R = 1\text{ V}$; $f = 100\text{ MHz}$ | 100 | | K Ω |
| Series inductance | L_s | | 2 | | nH |

Note

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

■ Marking

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