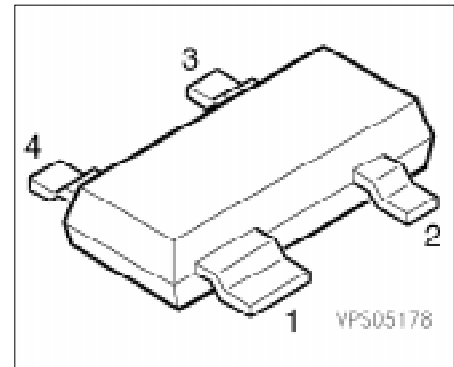


Features

- High barrier diode for balanced mixers, phase detectors and modulators



ESD: ElectroStatic Discharge sensitive device, observe handling precautions!

| Type | Marking | Ordering Code (taped & reel) | Pin Configuration | Package ¹⁾ |
|-------------|---------|------------------------------|-------------------|-----------------------|
| BAT 114-099 | S7 | Q62702-A1017 | | SOT-143 |

¹⁾ Dimensions see chapter **Package Outlines**

Maximum Ratings

(per diode)

| Parameter | Symbol | Limit Values | Unit |
|-------------------------------------|-----------|---------------|------|
| Reverse voltage | V_R | 4 | V |
| Forward current | I_F | 90 | mA |
| Operation temperature | T_{op} | - 55 to + 150 | °C |
| Storage temperature | T_{stg} | - 55 to + 150 | °C |
| Power dissipation, $T_S \leq 70$ °C | P_{tot} | 100 | mW |

Thermal Resistance

(per diode)

| Parameter | Symbol | Limit Values | Unit |
|-----------------------------------|------------|--------------|------|
| Junction to soldering point | R_{thJS} | ≤ 780 | K/W |
| Junction to ambient ¹⁾ | R_{thJA} | ≤ 1020 | K/W |

¹⁾ Mounted on alumina 15 mm × 16.7 mm to 0.7 mm

Electrical Characteristics

(per diode; $T_A = 25\text{ °C}$)

| Parameter | Symbol | Limit Values | | | Unit |
|--|--------------|--------------|------------|------------|----------|
| | | min. | typ. | max. | |
| Breakdown voltage $I_R = 5\ \mu\text{A}$ | V_{BR} | 4 | – | – | V |
| Forward voltage $I_F = 1\ \text{mA}$ $I_F = 10\ \text{mA}$ | V_F | – – | 0.6 0.7 | 0.7 0.8 | V |
| Forward voltage matching ¹⁾ $I_F = 10\ \text{mA}$ | ΔV_F | – | – | 10 | mV |
| Diode capacitance $V_R = 0\ \text{V}, f = 1\ \text{MHz}$ | C_T | – | 0.25 | 0.5 | pF |
| Forward resistance $I_F = 10\ \text{mA} / 50\ \text{mA}$ | R_F | – | 5.5 | – | Ω |

¹⁾ ΔV_F is difference between lowest and highest V_F in component.

Forward Current $I_F = f(V_F)$

