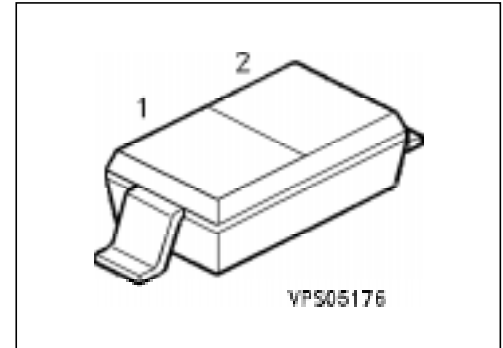


Silicon Variable Capacitance Diode

BB 620

- For Hyperband TV/VTR tuners, Bd I



| Type | Marking | Ordering Code (tape and reel) | Pin Configuration | Package ¹⁾ |
|--------|---------|-------------------------------|-------------------|-----------------------|
| BB 620 | red S | Q62702-B403 | | SOD-123 |

Maximum Ratings

| Parameter | Symbol | Values | Unit |
|-----------------------------|-----------|----------------|------|
| Reverse voltage | V_R | 30 | V |
| Forward current | I_F | 20 | mA |
| Operating temperature range | T_{op} | - 55 ... + 125 | °C |
| Storage temperature range | T_{stg} | - 55 ... + 150 | |

Thermal Resistance

| | | | |
|--------------------|-------------|-------|-----|
| Junction - ambient | $R_{th JA}$ | ≤ 450 | K/W |
|--------------------|-------------|-------|-----|

¹⁾ For detailed information see chapter Package Outlines.

Electrical Characteristics

at $T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified.

| Parameter | Symbol | Values | | | Unit |
|---|--------------------------|-----------|--------|-----------|----------|
| | | min. | typ. | max. | |
| Reverse current $V_R = 30\text{ V}$ $V_R = 30\text{ V}, T_A = 85\text{ }^\circ\text{C}$ | I_R | – – | – – | 10 200 | nA |
| Diode capacitance $f = 1\text{ MHz}$ $V_R = 1\text{ V}$ $V_R = 28\text{ V}$ | C_T | 62 2.9 | – – | 76 3.4 | pF |
| Capacitance ratio $V_R = 1\text{ V}, 28\text{ V}; f = 1\text{ MHz}$ | $\frac{C_{T1}}{C_{T28}}$ | 19.5 | – | 25 | – |
| Capacitance matching $V_R = 1\text{ V} \dots 28\text{ V}, f = 1\text{ MHz}$ | $\frac{\Delta C_T}{C_T}$ | – | – | 2.5 | % |
| Series resistance $C_T = 30\text{ pF}; f = 100\text{ MHz}$ | r_s | – | 1.3 | – | Ω |
| Series inductance | L_s | – | 2.8 | – | nH |

Diode capacitance $C_T = f(V_R)$

$f = 1\text{ MHz}$

