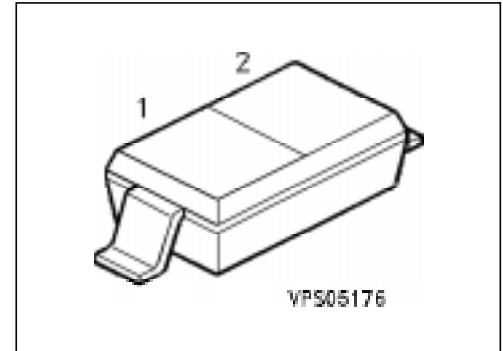


## Silicon Variable Capacitance Diode

BB 619

- For tuning of extended frequency bands in VHF TV/VTR tuners



| Type   | Ordering Code<br>(tape and reel) | Pin Configuration |  |   | Marking  | Package |
|--------|----------------------------------|-------------------|--|---|----------|---------|
|        |                                  | 1                 |  | 2 |          |         |
| BB 619 | Q62702-B570                      | C                 |  | A | yellow S | SOD-123 |

### Maximum Ratings

| Parameter                                      | Symbol    | Values         | Unit |
|--|-----------|----------------|------|
| Reverse voltage                                | $V_R$     | 30             | V    |
| Reverse voltage ( $R \geq 5 \text{ k}\Omega$ ) | $V_{RM}$  | 35             |      |
| Forward current                                | $I_F$     | 20             | mA   |
| Operating temperature range                    | $T_{op}$  | - 55 ... + 150 | °C   |
| Storage temperature range                      | $T_{stg}$ | - 55 ... + 150 |      |

### Thermal Resistance

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

### Electrical Characteristics

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

| Parameter  | Symbol                   | Values    |             |           | Unit     |
|--|--------------------------|-----------|-------------|-----------|----------|
|  |                          | min.      | typ.        | max.      |          |
| Reverse current<br>$V_R = 30\text{ V}$<br>$V_R = 30\text{ V}, T_A = 85\text{ °C}$  | $I_R$                    | –<br>–    | –<br>–      | 10<br>200 | nA       |
| Diode capacitance, $f = 1\text{ MHz}$<br>$V_R = 1\text{ V}$<br>$V_R = 28\text{ V}$ | $C_T$                    | 36<br>2.4 | 38.7<br>2.6 | 42<br>2.9 | pF       |
| Capacitance ratio<br>$V_R = 1\text{ V}, 28\text{ V}; f = 1\text{ MHz}$             | $\frac{C_{T1}}{C_{T28}}$ | 13.5      | 14.9        | –         | –        |
| Capacitance matching<br>$V_R = 1\text{ V} \dots 28\text{ V}; f = 1\text{ MHz}$     | $\frac{\Delta C_T}{C_T}$ | –         | –           | 2.5       | %        |
| Series resistance<br>$C_T = 12\text{ pF}, f = 100\text{ MHz}$                      | $r_s$                    | –         | 0.6         | –         | $\Omega$ |
| Series inductance  | $L_s$                    | –         | 2           | –         | nH       |

### Diode capacitance $C_T = f(V_R)$

$f = 1\text{ MHz}$

