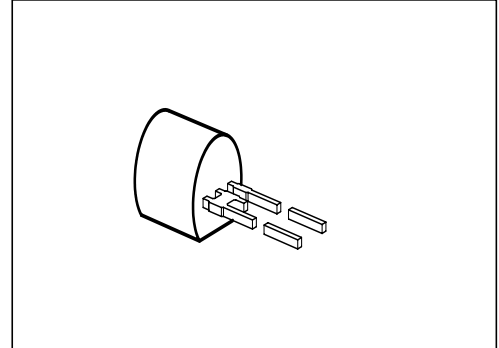


Silicon Variable Capacitance Diode

BB 112

- For AM tuning applications
- Specified tuning range
1 ... 8.0 V



| Type | Marking | Ordering Code | Pin Configuration | Package ¹⁾ |
|--------|---------|---------------|-------------------|-----------------------|
| BB 112 | — | Q62702-B240 | | TO-92 |

Maximum Ratings

| Parameter | Symbol | Values | Unit |
|--|----------|---------------|------|
| Reverse voltage | V_R | 12 | V |
| Forward current, $T_A \leq 60\text{ °C}$ | I_F | 50 | mA |
| Operating temperature range | T_{op} | - 55 ... + 85 | °C |

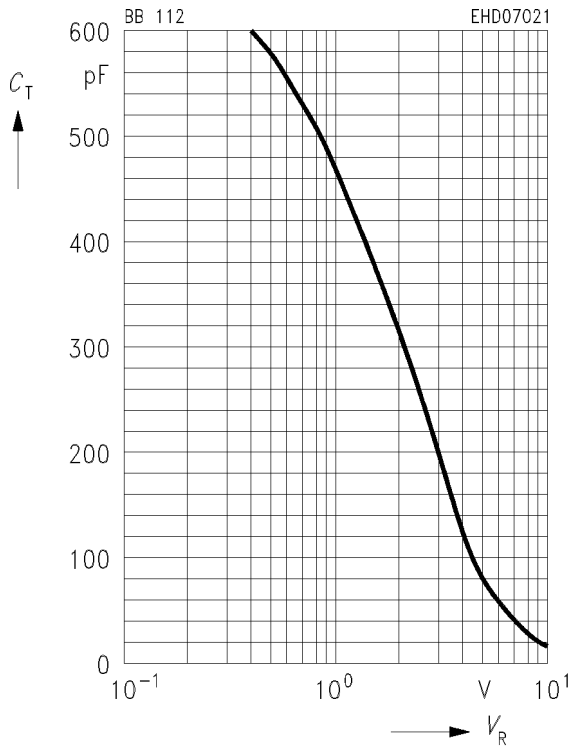
¹⁾ For detailed information see chapter Package Outlines.

Electrical Characteristics

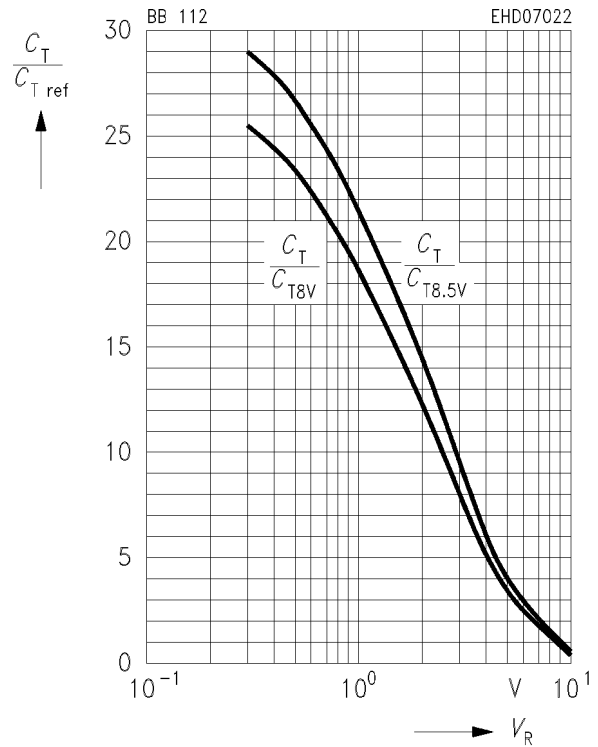
at $T_A = 25\text{ °C}$, unless otherwise specified.

| Parameter | Symbol | Values | | | Unit |
|---|-------------------------|-------------|----------|-----------|----------|
| | | min. | typ. | max. | |
| Reverse current $V_R = 10\text{ V}$ $V_R = 10\text{ V}, T_A = 60\text{ °C}$ | I_R | – – | – – | 50 200 | nA |
| Diode capacitance, $f = 1\text{ MHz}$ $V_R = 1\text{ V}$ $V_R = 8\text{ V}$ | C_T | 440 17.5 | 470 – | 520 34 | pF |
| Capacitance ratio $V_R = 1\text{ V}, 8\text{ V}$ | $\frac{C_{T1}}{C_{T8}}$ | 15 | – | – | – |
| Series resistance $V_R = 1\text{ V}, f = 0.5\text{ MHz}$ | r_s | – | 1.4 | – | Ω |
| Q factor $V_R = 1\text{ V}, f = 0.5\text{ MHz}$ | Q | – | 480 | – | – |
| Temperature coefficient of diode capacitance $V_R = 1\text{ V}, f = 1\text{ MHz}$ | TC_C | – | 500 | – | ppm/K |
| Capacitance matching $V_R = 1 \dots 8\text{ V}$ | $\frac{\Delta C_T}{C}$ | – | – | 3 | % |

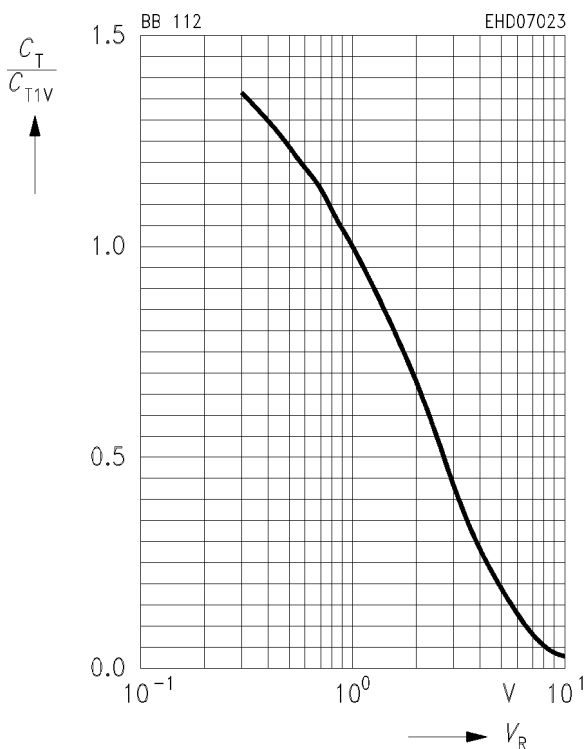
Diode capacitance $C_T = f(V_R)$



Capacitance ratio $C_T/C_{Tref} = f(V_R)$



Capacitance ratio $C_T/C_{T1V} = f(V_R)$



Temperature coefficient of junction capacitance $TC_C = f(V_R)$

