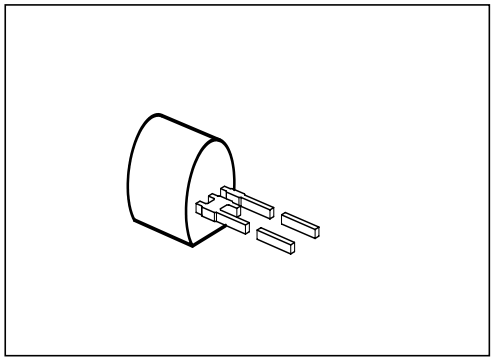
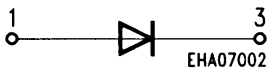
SIEMENS

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

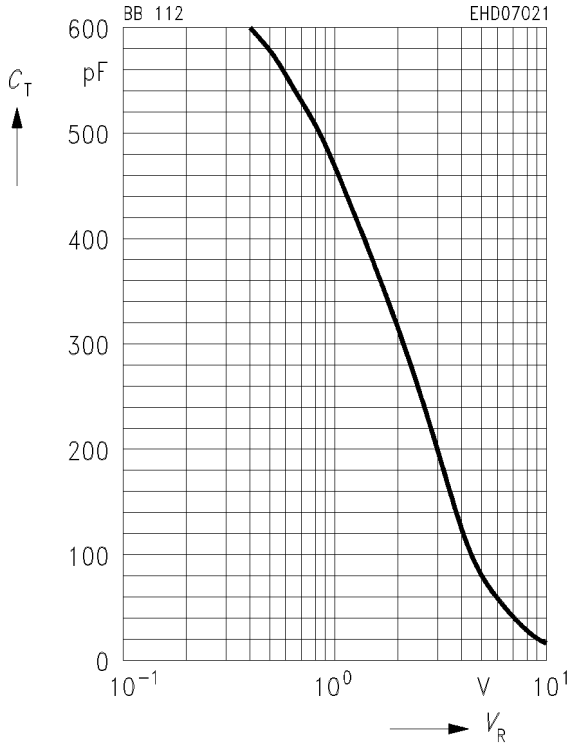
Parameter	Symbol	Values	Unit
Reverse voltage	V_R	12	V
Forward current, $T_A \leq 60$ °C	I_F	50	mA
Operating temperature range	T_{op}	– 55 … + 85	°C

1) For detailed information see chapter Package Outlines.

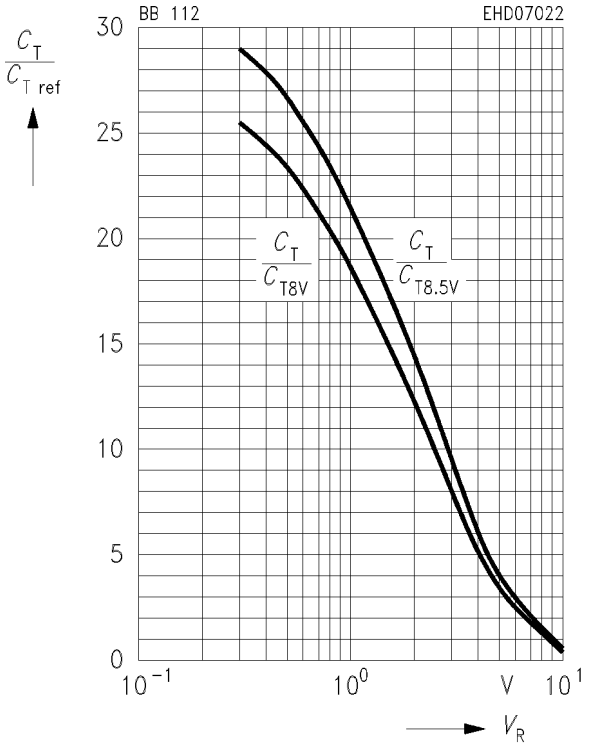
Electrical Characteristics
at T_A = 25 °C, unless otherwise specified.

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

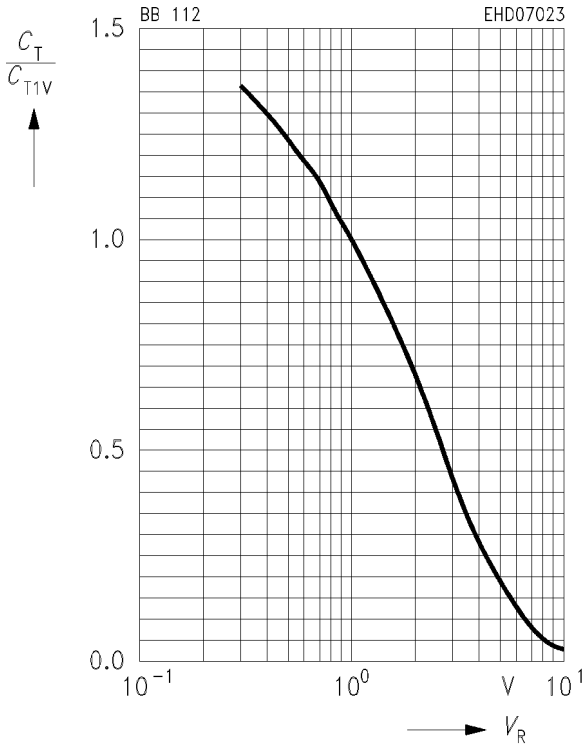
Diode capacitance $C_T = f(V_R)$



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



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



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