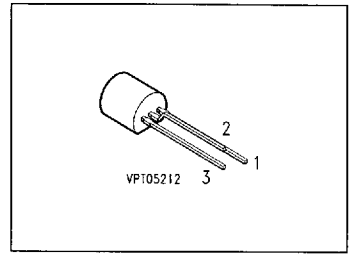
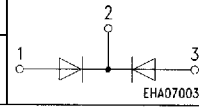
SIEMENS

Silicon Variable Capacitance Diode

BB 204 B
BB 204 G

- For FM tuners
- Monolithic chip with common cathode for perfect tracking of both diodes
- Uniform "square law" characteristics
- Ideal Hifi tuning device when used in low-distortion, back-to-back configuration
- Capacitance subgroups available (see Characteristics)



Type	Marking	Ordering Code	Pin Configuration	Package[1]
BB 204 B	blue	Q62702-B58-X6		TO-92
BB 204 G	green	Q62702-B57-X5		

Maximum Ratings

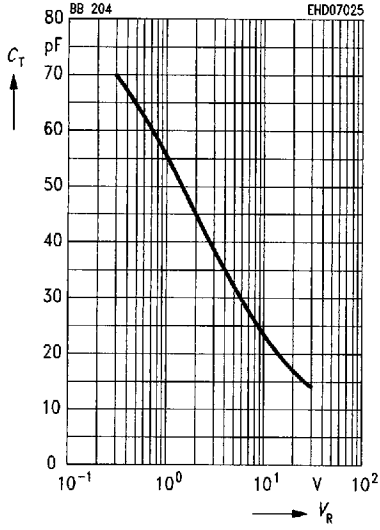
Parameter	Symbol	Values	Unit
Reverse voltage	V_R	30	V
Peak reverse voltage	V_{RM}	32	
Forward current, $T_A \leq 60$ °C	I_F	50	mA
Storage temperature range	T_{stg}	– 55 ... + 100	°C

[1] For detailed information see chapter Package Outlines.

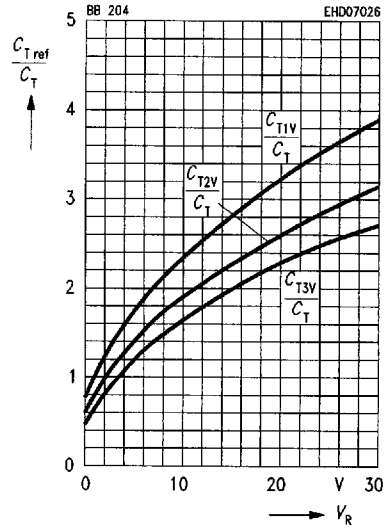
Electrical Characteristics per Diode
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Breakdown voltage I_R = 10 µA	$V_{(BR)}$	32	–	–	V
Reverse current V_R = 30 V V_R = 30 V, T_A = 60 °C	I_R	 – –	 – –	 20 0.2	 nA µA
Diode capacitance, f = 1 MHz V_R = 3 V, green V_R = 3 V, blue V_R = 30 V, green V_R = 30 V, blue	C_T	 34 37 – –	 – – 13.7 14.4	 39 42 – –	pF
Capacitance ratio, f = 1 MHz V_R = 3 V, 30 V	$\frac{C_{T3}}{C_{T30}}$	2.55	2.7	2.8	–
Series resistance C_T = 38 pF, f = 100 MHz	r_s	–	0.2	0.4	Ω
Q factor C_T = 38 pF, f = 100 MHz	Q	100	200	–	–
Temperature coefficient of diode capacitance V_R = 3 V, f = 1 MHz	TC_C	–	300	–	ppm/K

Diode capacitance $C_T = f(V_R)$
per diode, $f = 1$ MHz



Capacitance ratio $C_{Tref}/C_T = f(V_R)$
per diode; V_{ref} = 1 V, 2 V, 3 V; $f = 1$ MHz



Temperature coefficient of diode capacitance $TC_C = f(V_R)$
per diode, $f = 1$ MHz