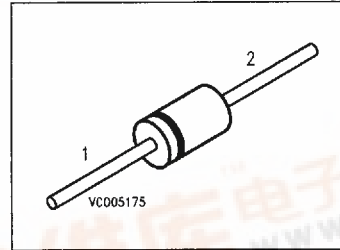


# SIEMENS

## Silicon Variable Capacitance Diodes

**BB 609 A**  
**BB 609 B**

- Especially for tuning of extended frequency bands in VHF and CATV tuners
- Not for new design



Type	Marking	Ordering Code	Pin Configuration	Package <sup>1)</sup>
BB 609 A	white	Q62702-B196		DO-35 DHD
BB 609 B		Q62702-B197		

### Maximum Ratings

Parameter	Symbol	Values	Unit
Peak reverse voltage	$V_{RM}$	30	V
Forward current, $T_A \leq 60^\circ\text{C}$	$I_F$	20	mA
Operating temperature range	$T_{op}$	- 55 ... + 100	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	- 55 ... + 150	

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Reverse current $V_R = 30\text{ V}$ $V_R = 30\text{ V}, T_A = 60\text{ }^\circ\text{C}$	$I_R$	– –	– –	20 200	nA
Diode capacitance, $f = 1\text{ MHz}$ BB 609 A: $V_R = 1\text{ V}$ $V_R = 28\text{ V}$ BB 609 B: $V_R = 1\text{ V}$ $V_R = 28\text{ V}$	$C_T$	32.5 2.5 33.5 2.8	– – – –	– 3 – 3.2	pF
Capacitance ratio $V_R = 1\text{ V}, 28\text{ V}; f = 1\text{ MHz}$	$\frac{C_{T1}}{C_{T28}}$	12	–	15	–
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 $C_T = 12\text{ pF}, f = 100\text{ MHz}$	$r_s$	–	0.7	1	$\Omega$
Series inductance	$L_s$	–	3	–	nH

**Diode capacitance  $C_T = f(V_R)$**   
 $f = 1\text{ MHz}$

