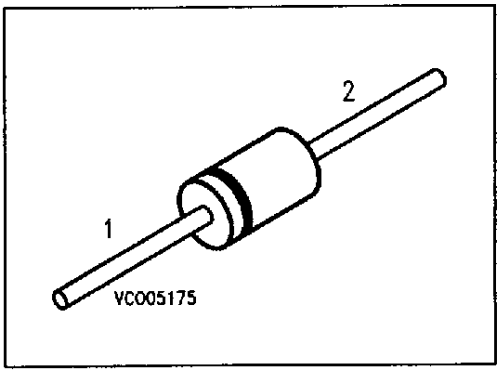
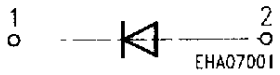
SIEMENS

Silicon Variable Capacitance Diodes

BB 505 B
BB 505 G

- For UHF and VHF tuners
- Not for new design



Type	Marking	Ordering Code	Pin Configuration	Package[1]
BB 505 B	orange	Q62702-B37		DO-35 DHD
BB 505 G		Q62702-B270		

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	28	V
Peak reverse voltage	V_{RM}	30	
Forward current, $T_A \leq 60$ °C	I_F	20	mA
Operating temperature range	T_{op}	– 55 ... + 100	°C
Storage temperature range	T_{stg}	– 55 ... + 150	

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	I_R				
V_R = 28 V		–	–	20	nA
V_R = 28 V, T_A = 60 °C		–	–	0.5	µA
Diode capacitance, f = 1 MHz	C_T				pF
BB 505 B: V_R = 1 V		–	17.5	–	
V_R = 28 V		1.85	–	2.25	
BB 505 G: V_R = 1 V		–	17.5	–	
V_R = 28 V		1.8	–	2.4	
Capacitance ratio,	$\frac{C_{T1}}{C_{T28}}$				–
V_R = 1 V, 28 V; f = 1 MHz					
BB 505 B		7.7	–	9.4	
BB 505 G		7.5	–	9.5	
Capacitance matching	$\frac{\Delta C_T}{C_T}$	–	–	3	%
V_R = 0.5 V ... 28 V					
Series resistance, C_T = 9 pF, f = 470 MHz	r_s				Ω
BB 505 B		–	–	0.7	
BB 505 G		–	–	1	
Series inductance	L_s	–	3	–	nH
Temperature coefficient of diode capacitance	TC_C				ppm/K
V_R = 1 V, f = 1 MHz		–	480	–	

Diode capacitance $C_T = f(V_R)$
$f = 1$ MHz