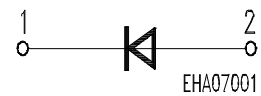
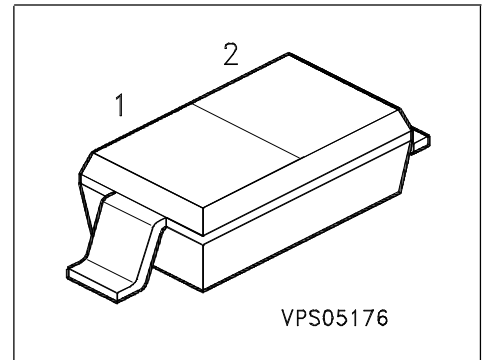


Silicon Variable Capacitance Diode

Preliminary data

- Frequency range up to 2 GHz
special design for use in TV-sat indoor units



Type	Marking	Ordering Code	Pin Configuration		Package
BB 831	white T	Q62702-B592	1 = C	2 = A	SOD-323

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	30	V
Peak reverse voltage ($R \geq 5k\Omega$)	V_{RM}	35	
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ...+125	°C
Storage temperature	T_{stg}	-55 ...+150	

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current $V_R = 30\text{ V}$	I_R	-	-	20	nA
Reverse current $V_R = 30\text{ V}, T_A = 85^\circ\text{C}$	I_R	-	-	500	
AC characteristics					
Diode capacitance $V_R = 1\text{ V}, f = 1\text{ MHz}$ $V_R = 28\text{ V}, f = 1\text{ MHz}$	C_T	7.8 0.85	8.8 1.02	9.8 1.2	pF
Capacitance ratio $V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$	C_{T1}/C_{T28}	7.8	8.6	9.5	-
Capacitance matching $V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$	$\Delta C_T/C_T$	-	-	3	%
Series resistance $V_R = 1\text{ V}, f = 100\text{ MHz}$	r_s	-	1	-	Ω
Series inductance	L_s	-	1.8	-	nH

1) In-line matching. For details please refer to Application Note 047

Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

