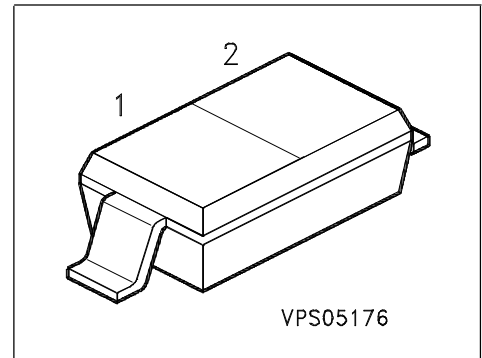


Silicon Tuning Diode

Preliminary data

- Extended frequency range up to 2.8 GHz
special design for use in TV-sat indoor units
- High capacitance ratio



Type	Marking	Ordering Code	Pin Configuration		Package
BB 837	M	Q62702-B0904	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 ...+150	°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	-	-	10	nA
Reverse current $V_R = 30\text{ V}, T_A = 85^\circ\text{C}$	I_R	-	-	200	
AC characteristics					
Diode capacitance $V_R = 1\text{ V}, f = 1\text{ MHz}$ $V_R = 25\text{ V}, f = 1\text{ MHz}$ $V_R = 28\text{ V}, f = 1\text{ MHz}$	C_T	6 - 0.45	6.6 0.55 0.54	7.2 - 0.65	pF
Capacitance ratio $V_R = 1\text{ V}, V_R = 25\text{ V}, f = 1\text{ MHz}$	C_{T1}/C_{T25}	-	12	-	
Capacitance ratio $V_R = 1\text{ V to } 28\text{ V}, f = 1\text{ MHz}$	C_{T1}/C_{T28}	9.7	12.2	-	
Capacitance matching $V_R = 1\text{ V to } 28\text{ V}, f = 1\text{ MHz}$	$\Delta C_T/C_T$	-	-	5	%
Series resistance $V_R = 1\text{ V}, f = 470\text{ MHz}$	r_s	-	1.5	-	Ω
Series inductance	L_s	-	1.4	-	nH

Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

