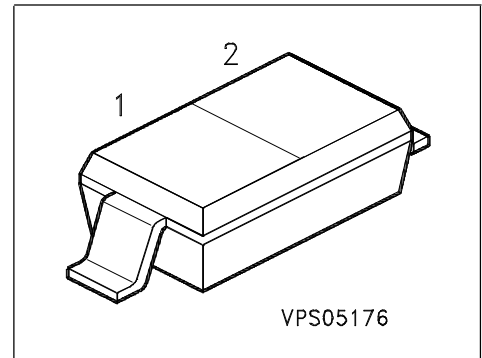


### Silicon Tuning Diode

#### 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.	
<b>DC characteristics</b>					
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	
<b>AC characteristics</b>					
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	-	$\Omega$
Series inductance	$L_s$	-	1.4	-	nH

Diode capacitance  $C_T = f(V_R)$

$f = 1\text{MHz}$

