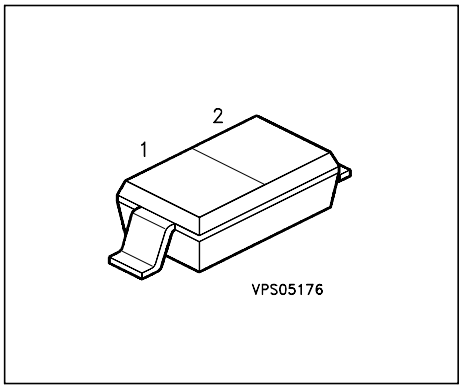
Silicon Tuning Diode

- High Q hyperabrupt dual tuning diode
- Designed for low tuning voltage operation
- For VCO's in mobile communications equipment



Type	Marking	Ordering Code	Pin Configuration			Package
BBY 52-03W	I (white)	Q62702-B664	1 = C	2 = A	-	SOD-323

Maximum Ratings

Parameter	Symbol	Values	Unit
Diode reverse voltage	V_R	7	V
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°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current	I_R				nA
V_R = 6 V, T_A = 25 °C		-	-	10	
V_R = 6 V, T_A = 65 °C		-	-	200	
AC characteristics					
Diode capacitance	C_T				pF
V_R = 1 V, f = 1 MHz		1.4	1.85	2.2	
V_R = 2 V, f = 1 MHz		-	1.5	-	
V_R = 3 V, f = 1 MHz		-	1.35	-	
V_R = 4 V, f = 1 MHz		0.85	1.15	1.45	
Capacitance ratio	C_{T1}/C_{T4}				-
V_R = 1 V, V_R = 4 V, f = 1 MHz		1.1	1.6	2.1	
Series resistance	r_s				Ω
V_R = 1 V, f = 1 GHz		-	0.9	1.8	
Case capacitance	C_C				pF
f = 1 MHz		-	0.12	-	
Series inductance chip to ground	L_s	-	1.8	-	nH

Diode capacitance $C_T = f(V_R)$

f = 1MHz