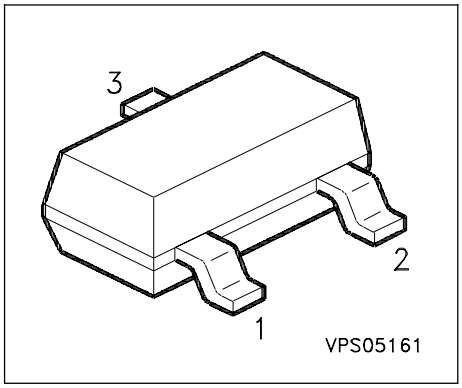
Silicon Tuning Diode

Preliminary data



- High Q hyperabrupt tuning diode
- Designed for low tuning voltage operation for VCO's in mobile communications equipment
- High ratio at low reverse voltage

Type	Marking	Ordering Code	Pin Configuration			Package
BBY 53	S7s	Q62702-B824	1 = A1	2 = A2	3 = C1/C2	SOT-23

Maximum Ratings

Parameter	Symbol	Values	Unit
Diode reverse voltage	V_R	6	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 = 4 V, T_A = 25 °C		-	-	10	
V_R = 4 V, T_A = 65 °C		-	-	200	
AC characteristics					
Diode capacitance	C_T				pF
V_R = 1 V, f = 1 MHz		4.8	5.3	5.8	
V_R = 3 V, f = 1 MHz		1.85	2.4	3.1	
Capacitance ratio	C_{T1}/C_{T3}				-
V_R = 1 V, V_R = 3 V, f = 1 MHz		1.8	2.2	2.6	
Series resistance	r_s				Ω
V_R = 1 V, f = 1 GHz		-	0.37	-	
Case capacitance	C_C				pF
f = 1 MHz		-	0.12	-	
Series inductance chip to ground	L_s	-	2	-	nH

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