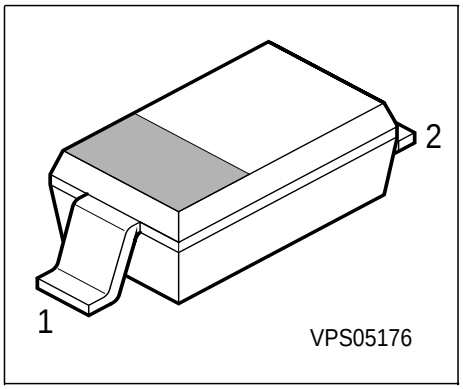
Silicon Tuning Diode

Preliminary data

- Excellent linearity
- High Q hyperabrupt tuning diode
- Low series inductance
- Designed for low tuning voltage operation for VCO's in mobile communications equipment
- Very low capacitance spread



Type	Marking	Ordering Code	Pin Configuration		Package
BBY 55-03W	7 white	Q62702-B0911	1 = C	2 = A	SOD-323

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	16	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 V_R = 15 V	I_R	-	-	3	nA
Reverse current V_R = 15 V, T_A = 65 °C	I_R	-	-	100	
AC characteristics					
Diode capacitance	C_T				pF
V_R = 2 V, f = 1 MHz		14	15	16	
V_R = 4 V, f = 1 MHz		10	11	12	
V_R = 10 V, f = 1 MHz		5.5	6	6.5	
Capacitance ratio V_R = 2 V, V_R = 10 V, f = 1 MHz	C_{T2}/C_{T10}	2	2.5	3	-
Series resistance V_R = 5 V, f = 470 MHz	r_s	-	0.15	0.35	Ω
Case capacitance f = 1 MHz	C_C	-	0.09	-	pF
Series inductance	L_s	-	0.6	-	nH

Diode capacitance $C_T = f(V_R)$

f = 1MHz