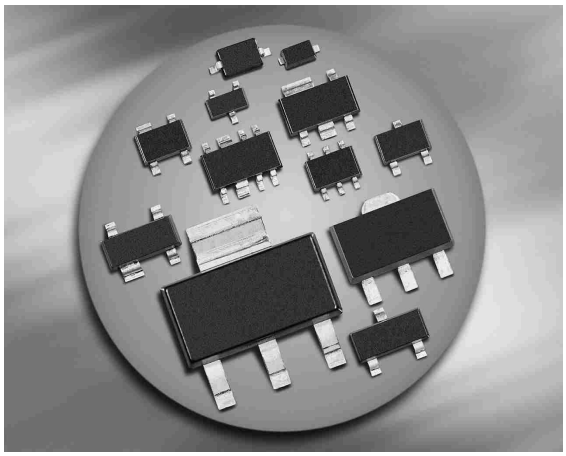
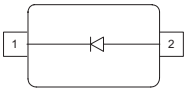
Silicon Tuning Diodes

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



BBY55-02V
BBY55-02W
BBY55-03W



Type	Package	Configuration	L_S(nH)	Marking
BBY55-02V	SC79	single	0.6	7
BBY55-02W	SCD80	single	0.6	77
BBY55-03W	SOD323	single	1.8	7 white

Maximum Ratings at T_A = 25°C, unless otherwise specified

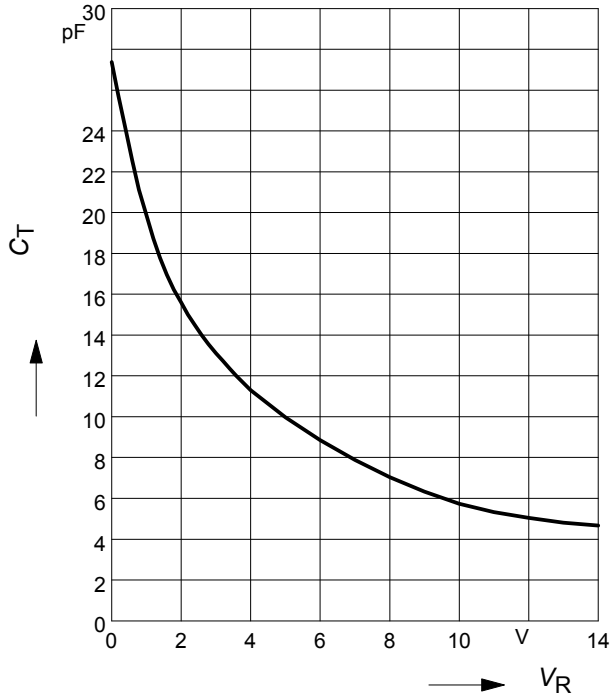
Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	16	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ... 150	°C
Storage temperature	T_{stg}	-55 ... 150	

Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current	I_R				nA
V_R = 15 V		-	-	3	
V_R = 15 V, T_A = 85 °C		-	-	100	
AC Characteristics					
Diode capacitance	C_T				pF
V_R = 1 V, f = 1 MHz		17.5	18.6	19.6	
V_R = 2 V, f = 1 MHz		14	15	16	
V_R = 3 V, f = 1 MHz		11.6	12.6	13.6	
V_R = 4 V, f = 1 MHz		10	11	12	
V_R = 10 V, f = 1 MHz		5.5	6	6.5	
Capacitance ratio	C_{T2}/C_{T10}	2	2.5	3	
V_R = 2 V, V_R = 10 V, f = 1 MHz					
Series resistance	r_S	-	0.15	0.4	Ω
V_R = 5 V, f = 470 MHz					

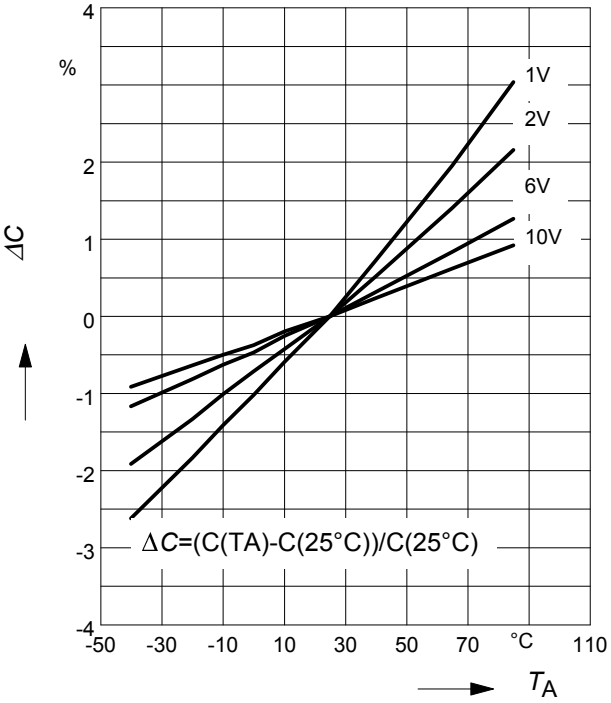
Diode capacitance $C_T = f(V_R)$

f = 1MHz



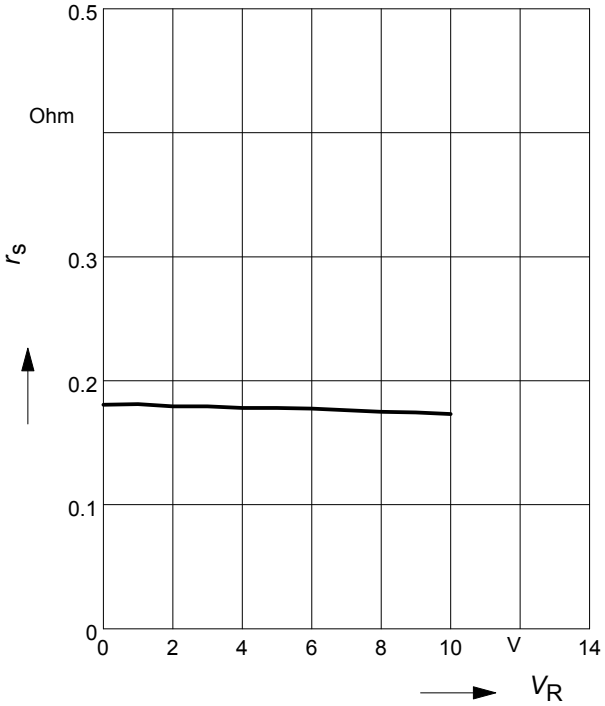
Capacitance change $\Delta C = f(T_A)$

f = 1 MHz



Series resistance $r_S = f(V_R)$

f = 470 MHz



Reverse current $I_R = f(V_R)$

T_A = Parameter