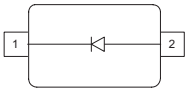


Silicon Tuning Diode

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



BBY56-02W
BBY56-03W



Type	Package	Configuration	L_S (nH)	Marking
BBY56-02W	SCD80	single	0.6	66
BBY56-03W	SOD323	single	1.8	6 red

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

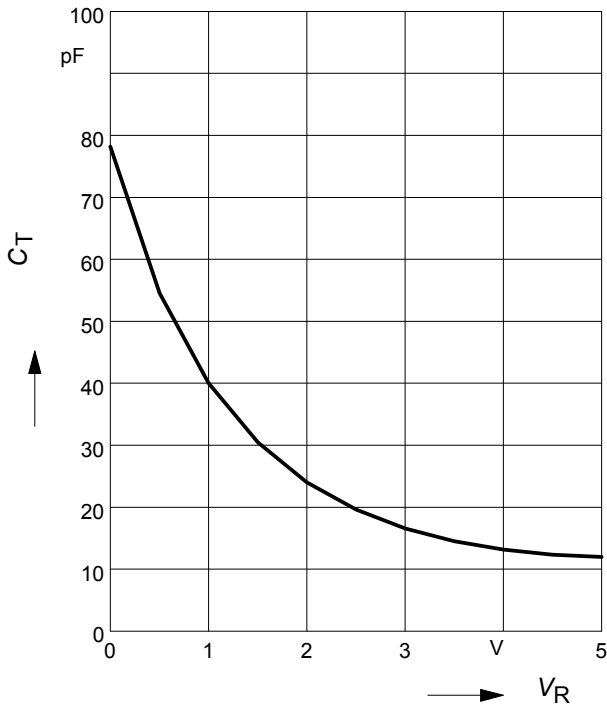
Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	10	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ... 150	°C
Storage temperature	T_{stg}	-55 ... 150	

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current	I_R				nA
$V_R = 6\text{ V}$		-	-	5	
$V_R = 6\text{ V}, T_A = 85^\circ\text{C}$		-	-	100	
AC Characteristics					
Diode capacitance	C_T				pF
$V_R = 1\text{ V}, f = 1\text{ MHz}$		37	40	43	
$V_R = 2\text{ V}, f = 1\text{ MHz}$		22	-	25	
$V_R = 3\text{ V}, f = 1\text{ MHz}$		14.8	15.8	16.8	
$V_R = 4\text{ V}, f = 1\text{ MHz}$		-	12.1	-	
Capacitance ratio	C_{T1}/C_{T3}				
$V_R = 1\text{ V}, V_R = 3\text{ V}, f = 1\text{ MHz}$		2.15	2.53	-	
$V_R = 1\text{ V}, V_R = 4\text{ V}, f = 1\text{ MHz}$		-	3.3	-	
Series resistance	r_S				Ω
$V_R = 1\text{ V}, f = 470\text{ MHz}$		-	0.25	-	

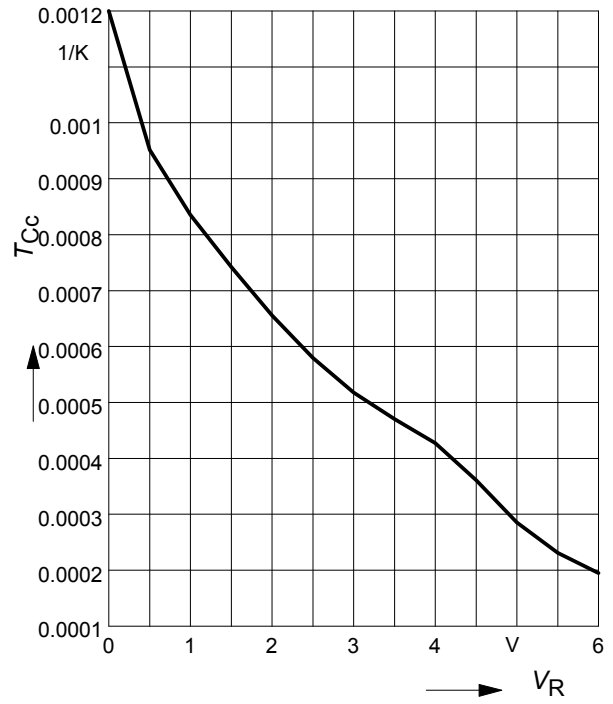
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



Temperature coefficient of the diode capacitance $T_{CC} = f(V_R)$

$f = 1\text{MHz}$



Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$

