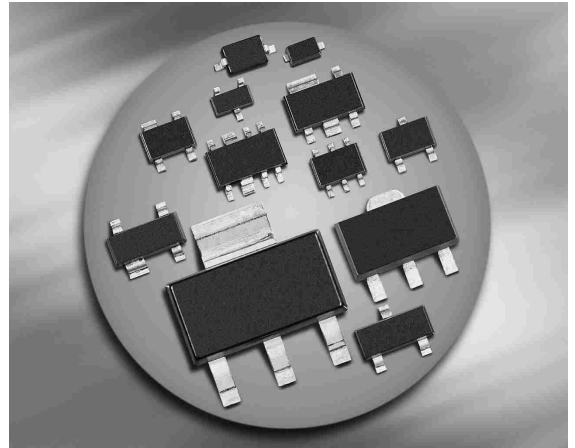
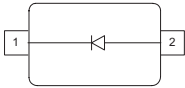


Silicon Tuning Diodes

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



BBY52-02L
BBY52-02W



Type	Package	Configuration	L_S (nH)	Marking
BBY52-02L*	TSLP-2-1	single, leadless	0.4	K
BBY52-02W	SCD80	single	0.6	KK

* Preliminary

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

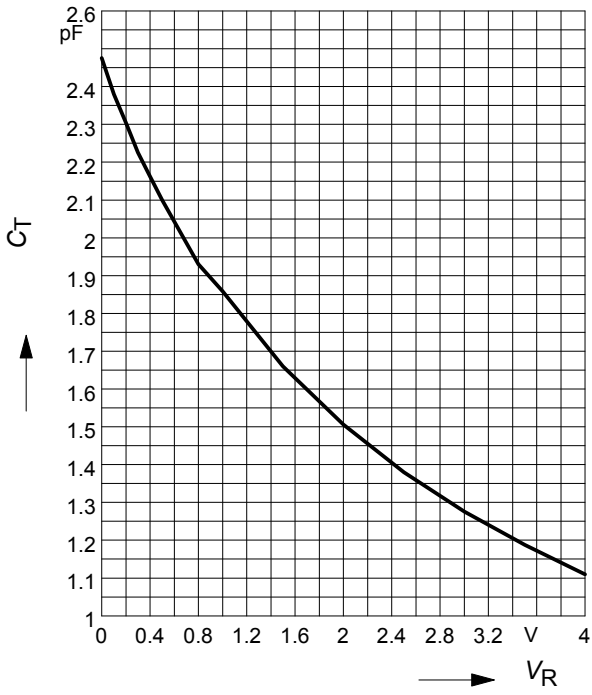
Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	7	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ... 150	°C
Storage temperature	T_{stg}	-55 ... 150	

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current	I_R				nA
$V_R = 6\text{ V}$		-	-	10	
$V_R = 6\text{ V}, T_A = 85^\circ\text{C}$		-	-	200	
AC Characteristics					
Diode capacitance	C_T				pF
$V_R = 1\text{ V}, f = 1\text{ MHz}$		1.4	1.85	2.2	
$V_R = 2\text{ V}, f = 1\text{ MHz}$		0.95	1.5	2	
$V_R = 3\text{ V}, f = 1\text{ MHz}$		0.9	1.35	1.75	
$V_R = 4\text{ V}, f = 1\text{ MHz}$		0.85	1.15	1.45	
Capacitance ratio	C_{T1}/C_{T4}	1.1	1.6	2.1	
$V_R = 1\text{ V}, V_R = 4\text{ V}, f = 1\text{ MHz}$					
Series resistance	r_S	-	0.9	1.7	Ω
$V_R = 1\text{ V}, f = 1\text{ GHz}$					

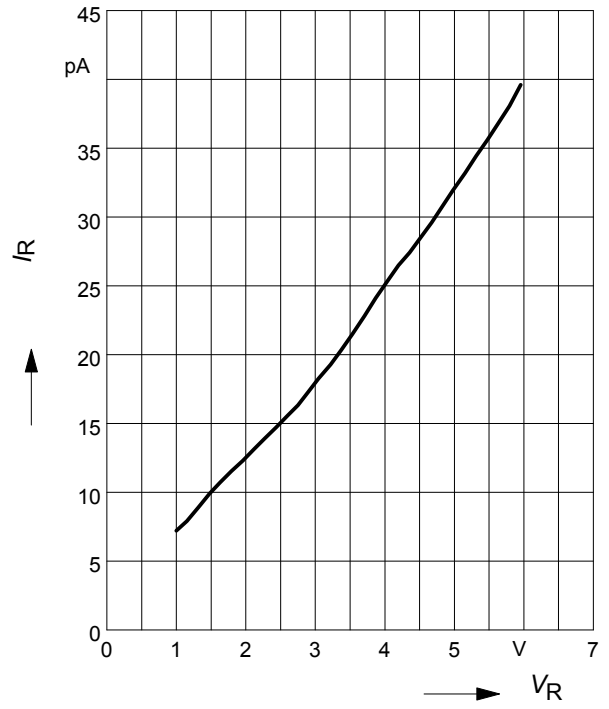
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



Reverse current $I_R = f(V_R)$

$T_A = 25^\circ\text{C}$



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