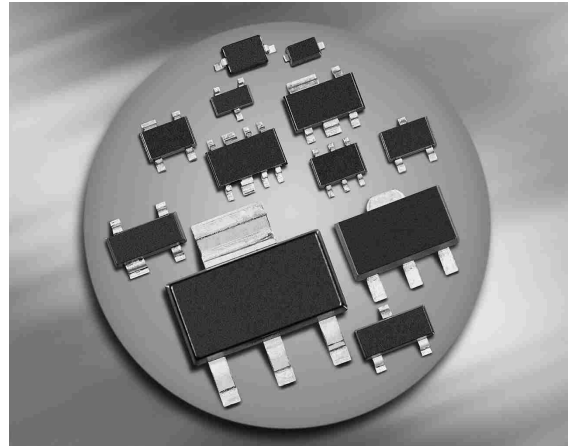


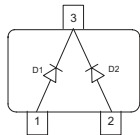
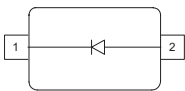
Silicon Tuning Diode

- Excellent linearity
- High Q hyperabrupt tuning diode
- Low series resistance
- High capacitance ratio
- Designed for low tuning voltage operation for VCO's in mobile communications equipment
- For control elements such as TCXOs and VCXOs



BBY57-02L
BBY57-02V
BBY57-02W

BBY57-05W



Type	Package	Configuration	L_S (nH)	Marking
BBY57-02L*	TSLP-2	single	0.4	55
BBY57-02V	SC79	single	0.6	5
BBY57-02W	SCD80	single	0.6	55
BBY57-05W	SOT323	common cathode	1.4	D5s

* Preliminary

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

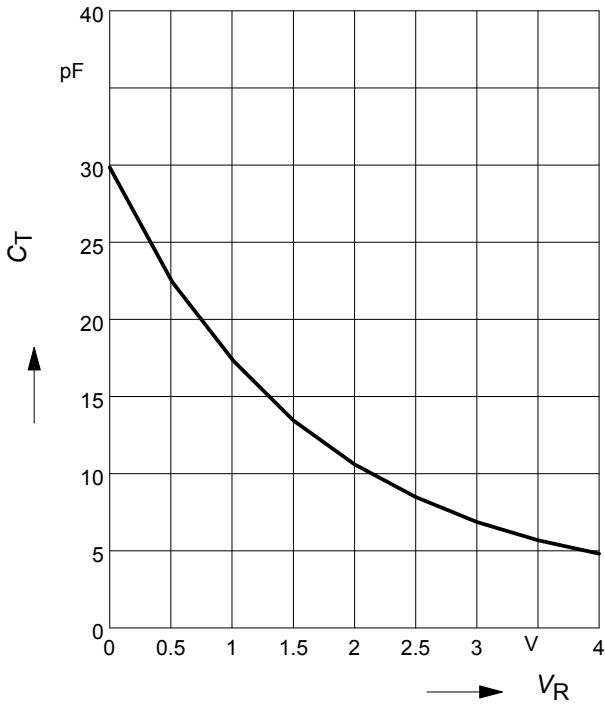
Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	10	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ... 125	°C
Storage temperature	T_{stg}	-55 ... 150	

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
$V_R = 8\text{ V}$		-	-	10	
$V_R = 8\text{ V}, T_A = 85^\circ\text{C}$		-	-	100	
AC Characteristics					
Diode capacitance	C_T				pF
$V_R = 1\text{ V}, f = 1\text{ MHz}$		16.5	17.5	18.6	
$V_R = 2.5\text{ V}, f = 1\text{ MHz}$		-	9.35	-	
$V_R = 3\text{ V}, f = 1\text{ MHz}$		-	7	-	
$V_R = 4\text{ V}, f = 1\text{ MHz}$		3.5	4.7	5.5	
Capacitance ratio	C_{T1}/C_{T3}	-	2.45	-	
$V_R = 1\text{ V}, V_R = 3\text{ V}, f = 1\text{ MHz}$					
Capacitance ratio	C_{T1}/C_{T4}	3	3.7	4.5	
$V_R = 1\text{ V}, V_R = 4\text{ V}, f = 1\text{ MHz}$					
Series resistance	r_S				Ω
$V_R = 1\text{ V}, f = 470\text{ MHz}, \text{BBY57-02L}$		-	0.35	-	
$V_R = 1\text{ V}, f = 470\text{ MHz}, \text{all others}$		-	0.3	-	

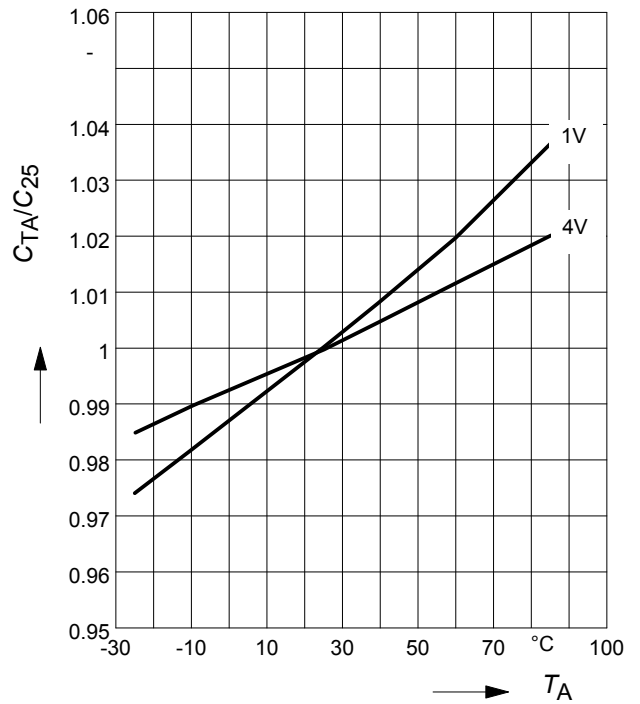
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

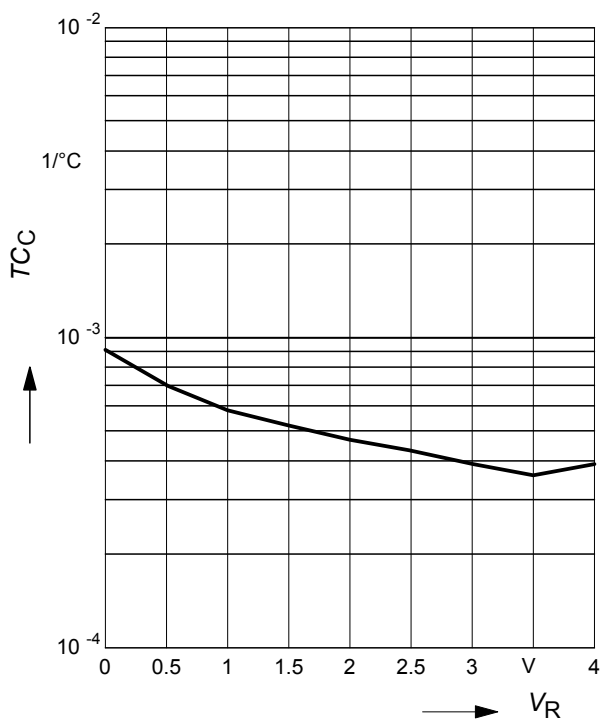


Normalized diode capacitance

$C_{(T_A)}/C_{(25^\circ\text{C})} = f(T_A); f = 1\text{MHz}$



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





LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.