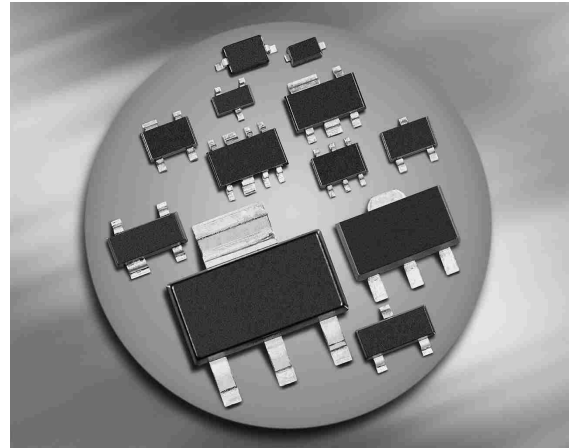
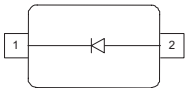


Silicon Tuning Diode

- For SAT - Indor units
- High capacitance ratio C_{1V}/C_{25V} (typ.15.8)
- Low series inductance
- Excellent uniformity and matching due to "in-line" matching assembly procedure


BB867-02V


Type	Package	Configuration	L_S (nH)	Marking
BB867-02V*	SC79	single	0.6	Y

* Preliminary

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	30	V
Peak reverse voltage- ($R \geq 5\text{k}\Omega$)	V_{RM}	35	
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
$V_R = 30\text{ V}$		-	-	10	
$V_R = 30\text{ V}, T_A = 85^\circ\text{C}$		-	-	200	
AC Characteristics					
Diode capacitance	C_T				pF
$V_R = 1\text{ V}, f = 1\text{ MHz}$		8	8.7	9.4	
$V_R = 25\text{ V}, f = 1\text{ MHz}$		0.5	0.55	0.6	
$V_R = 28\text{ V}, f = 1\text{ MHz}$		0.45	0.52	-	
Capacitance ratio	C_{T1}/C_{T25}	14	15.8	-	-
$V_R = 1\text{ V}, V_R = 25\text{ V}, f = 1\text{ MHz}$					
Capacitance ratio	C_{T1}/C_{T28}	-	16.7	-	
$V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$					
Capacitance matching ¹⁾	$\Delta C_T/C_T$	-	-	5	%
$V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$					
Series resistance	r_S	-	2.8	-	Ω
$V_R = 5\text{ V}, f = 470\text{ MHz}$					

¹For details please refer to Application Note 047

Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

