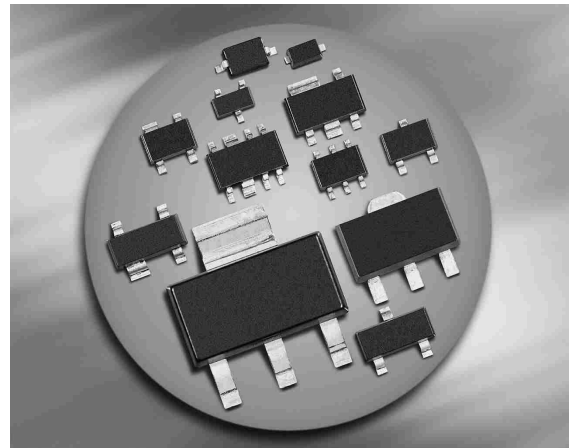
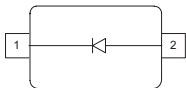


TY Variable Capacitance Diodes

- Frequency range up to 2 GHz
- Special design for use in TV-sat indoor unit



BB831



Type	Package	Configuration	L_S (nH)	Marking
BB831	SOD323	single	1.8	white T

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 ... 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
$V_R = 30\text{ V}$		-	-	20	
$V_R = 30\text{ V}, T_A = 85^\circ\text{C}$		-	-	500	
AC Characteristics					
Diode capacitance	C_T				pF
$V_R = 1\text{ V}, f = 1\text{ MHz}$		7.8	8.8	9.8	
$V_R = 28\text{ V}, f = 1\text{ MHz}$		0.85	1.02	1.2	
Capacitance ratio	C_{T1}/C_{T28}	7.8	8.6	9.5	
$V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$					
Capacitance matching ¹⁾	$\Delta C_T/C_T$	-	-	3	%
$V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$					
Series resistance	r_S	-	1	-	Ω
$V_R = 1\text{ V}, f = 100\text{ MHz}$					

¹For details please refer to Application Note 047.