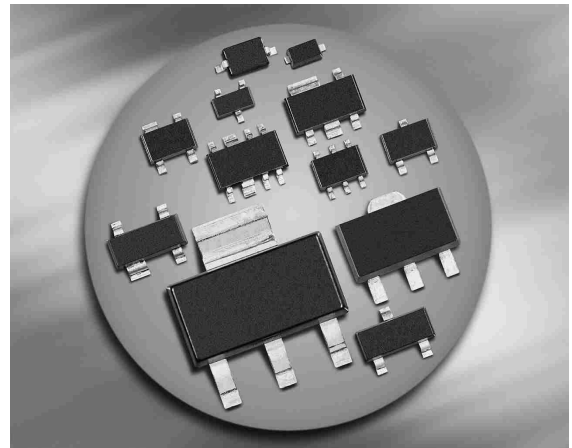
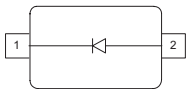


**TY Variable Capacitance Diode**

- For UHF-TV-tuners
- High capacitance ratio
- Low series inductance
- Low series resistance
- Excellent uniformity and matching due to "in-line" matching assembly procedure



**BB545**  
**BB565/-02V**



Type	Package	Configuration	$L_S$ (nH)	Marking
BB545	SOD323	single	1.8	white U
BB565	SCD80	single	0.6	CC
BB 565-02V	SC79	single	0.6	C

**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.	
<b>DC Characteristics</b>					
Reverse current	$I_R$				nA
$V_R = 30\text{ V}$		-	-	10	
$V_R = 30\text{ V}, T_A = 85^\circ\text{C}$		-	-	200	
<b>AC Characteristics</b>					
Diode capacitance	$C_T$				pF
$V_R = 1\text{ V}, f = 1\text{ MHz}$		18.5	20	21.5	
$V_R = 2\text{ V}, f = 1\text{ MHz}$		13.2	14.8	16.4	
$V_R = 25\text{ V}, f = 1\text{ MHz}$		1.85	2.07	2.28	
$V_R = 28\text{ V}, f = 1\text{ MHz}$		1.8	2	2.2	
Capacitance ratio	$C_{T1}/C_{T28}$	9	10	11	-
$V_R = 1\text{ V}, V_R = 28\text{ V}, f = 1\text{ MHz}$					
Capacitance ratio	$C_{T2}/C_{T25}$	6.3	7.2	8.1	
$V_R = 2\text{ V}, V_R = 25\text{ V}, f = 1\text{ MHz}$					
Capacitance matching <sup>1)</sup>	$\Delta C_T/C_T$				%
$V_R = 1\text{ V to } 28\text{ V}, f = 1\text{ MHz}, 7\text{ diodes sequence},$ BB545		-	-	2.5	
$V_R = 1\text{ V to } 28\text{ V}, f = 1\text{ MHz}, 4\text{ diodes sequence},$ BB565/ -02V		-	0.5	1.5	
$V_R = 1\text{ V to } 28\text{ V}, f = 1\text{ MHz}, 7\text{ diodes sequence},$ BB565/ -02V		-	0.7	2	
Series resistance	$r_S$	-	0.6	-	$\Omega$
$V_R = 3\text{ V}, f = 470\text{ MHz}$					

<sup>1</sup>For details please refer to Application Note 047