

VHF variable capacitance double diode

BB804

FEATURES

- Selected capacitance ranges
- Small plastic SMD package
- C8: 26 pF; ratio: 1.7
- Low series resistance.

APPLICATIONS

- Electronic tuning in FM radio applications.

DESCRIPTION

The BB804 is a variable capacitance double diode with a common cathode, fabricated in planar technology, and encapsulated in the SOT23 small plastic SMD package.

MARKING

TYPE NUMBER	CODE
BB804 R	SF 0
BB804 Y	SF 1
BB804 W	SF 2
BB804 G	SF 3

PINNING

PIN	DESCRIPTION
1	anode (a ₁)
2	anode (a ₂)
3	common cathode

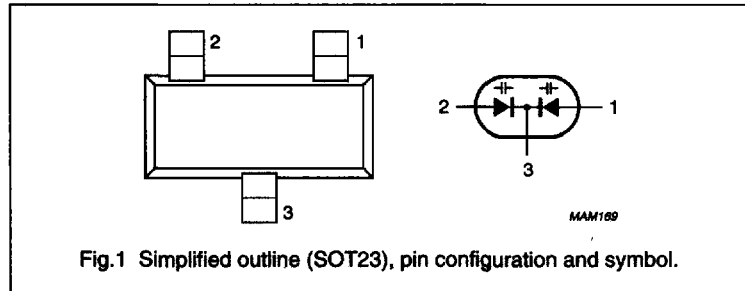


Fig.1 Simplified outline (SOT23), pin configuration and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
Per diode				
V _R	continuous reverse voltage	–	18	V
I _F	continuous forward current	–	50	mA
T _{stg}	storage temperature	–55	+150	°C
T _j	operating junction temperature	–55	+125	°C

VHF variable capacitance double diode

BB804

ELECTRICAL CHARACTERISTICS

 $T_j = 25\text{ }^\circ\text{C}$; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Per diode						
I_R	reverse current	$V_R = 16\text{ V}$; see Fig.3	–	–	20	nA
		$V_R = 16\text{ V}$; $T_j = 60\text{ }^\circ\text{C}$; see Fig.3	–	–	200	nA
r_s	diode series resistance	$f = 100\text{ MHz}$; note 1	–	0.2	–	Ω
C_d	diode capacitance	$V_R = 2\text{ V}$; $f = 1\text{ MHz}$; red 0; see Figs 2 and 4	42	–	43.5	pF
		$V_R = 2\text{ V}$; $f = 1\text{ MHz}$; yellow 1; see Figs 2 and 4	43	–	44.5	pF
		$V_R = 2\text{ V}$; $f = 1\text{ MHz}$; white 2; see Figs 2 and 4	44	–	45.5	pF
		$V_R = 2\text{ V}$; $f = 1\text{ MHz}$; green 3; see Figs 2 and 4	45	–	46.5	pF
$\frac{C_{d(2V)}}{C_{d(8V)}}$	capacitance ratio	$f = 1\text{ MHz}$	1.65	–	1.75	

Note1. V_R is the value at which $C_d = 38\text{ pF}$.

VHF variable capacitance double diode

BB804

GRAPHICAL DATA

