



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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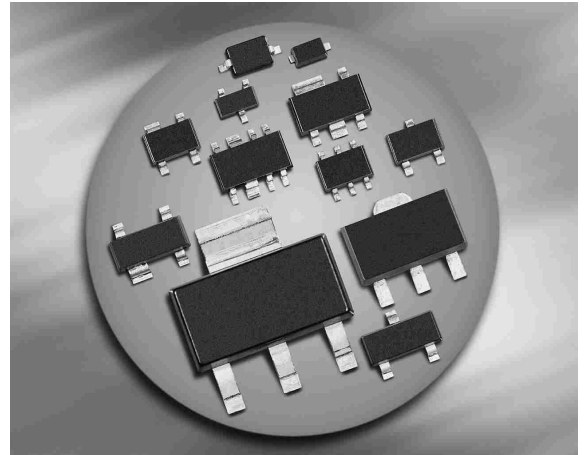
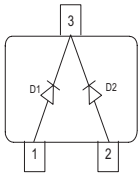
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**Silicon Variable Capacitance Diode**

- For FM tuners
- Monolithic chip with common cathode for perfect tracking of both diodes
- Uniform "square law" characteristics
- Ideal HiFi tuning device when used in low-distortion, back-to-back configuration
- Pb-free (ROHS compliant) package


**BB804**


Type	Package	Configuration	$L_S$ (nH)	Marking
BB804	SOT23	common cathode	1.8	SF1/2/3*

\*For differences see next page Capacitance groups

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	18	V
Peak reverse voltage	$V_{RM}$	20	
Forward current	$I_F$	50	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.	
<b>DC Characteristics</b>					
Reverse current $V_R = 16\text{ V}$ $V_R = 16\text{ V}, T_A = 65^\circ\text{C}$	$I_R$	-	-	20 200	nA
<b>AC Characteristics</b>					
Diode capacitance <sup>1)</sup> $V_R = 2\text{ V}, f = 1\text{ MHz}$	$C_T$	42	-	47.5	pF
Capacitance ratio $V_R = 2\text{ V}, V_R = 8\text{ V}, f = 1\text{ MHz}$	$C_{T2}/C_{T8}$	1.65	1.71	-	
Series resistance $V_R = 2\text{ V}, f = 100\text{ MHz}$	$r_S$	-	0.18	-	$\Omega$
Figure of merit $f = 100\text{ MHz}, V_R = 2\text{ V}$	$Q$	-	200	-	
Temperature coefficient of diode capacitance $V_R = 2\text{ V}, f = 1\text{ MHz}$	$TC_C$	-	330	-	ppm/K

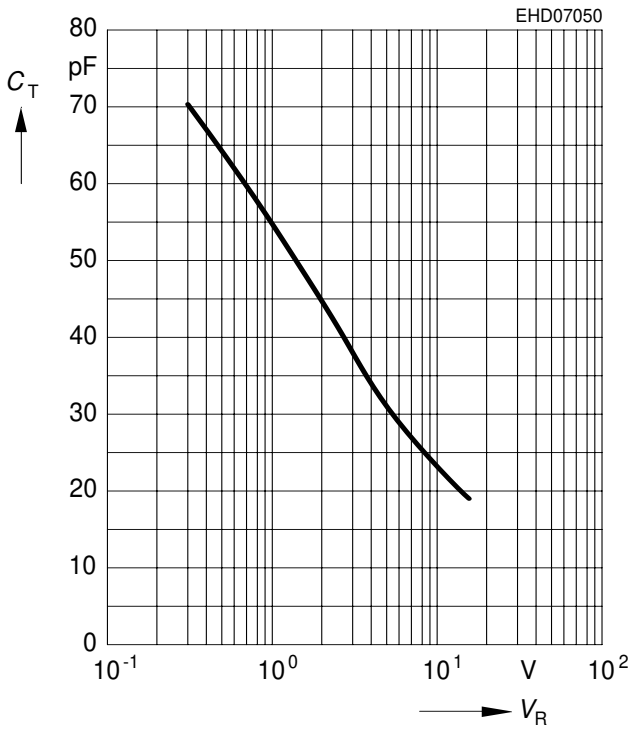
<sup>1</sup> Capacitance groups at 2V, coded 1; 2; 3

$C_T$ /groups	1	2	3
$C_{2V}$ min	43pF	44pF	45pF
$C_{2V}$ max	44.5pF	45.5pF	46.5pF

The capacitance subgroup is marked by the subgroup number printed on the component and the package label. A packing unit (e.g. 8mm tape) contain diodes of one subgroup only. Delivery of different capacitance subgroups requires a special agreement.

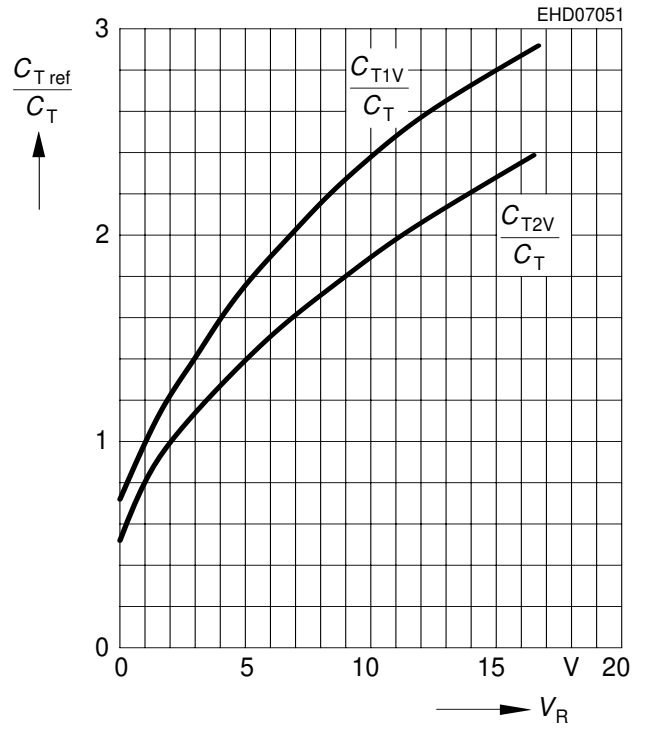
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$

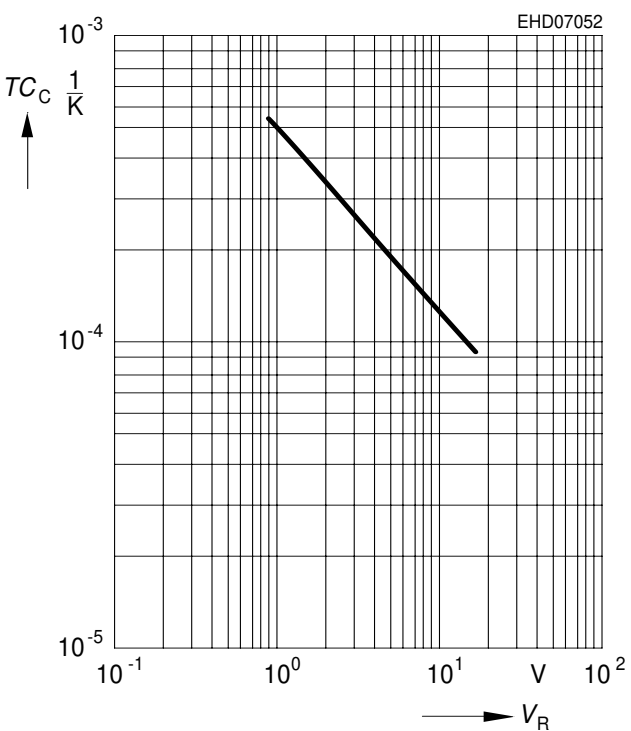


**Capacitance ratio  $C_{Tref}/C_T = f(V_R)$**

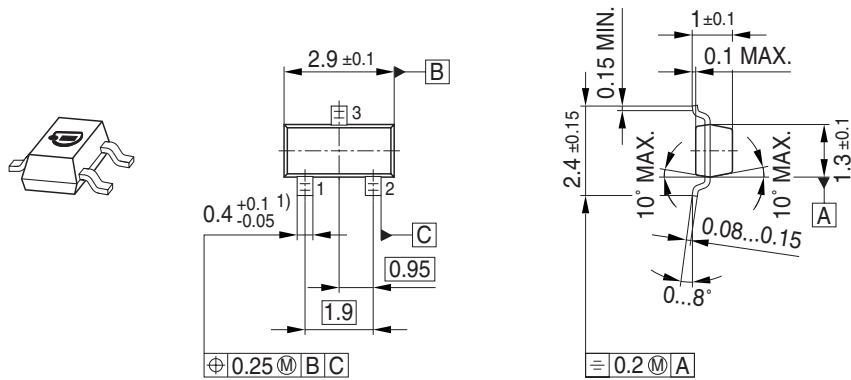
$f = 1\text{MHz}$



**Temperatur coefficient  $TC_C = f(V_R)$**

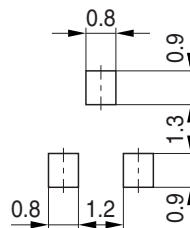


Package Outline

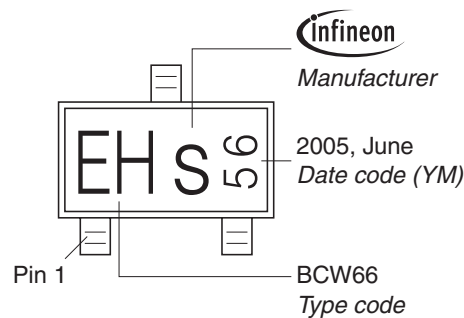


1) Lead width can be 0.6 max. in dambar area

Foot Print

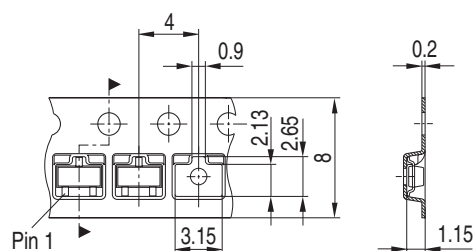


Marking Layout (Example)



Standard Packing

Reel  $\varnothing$ 180 mm = 3.000 Pieces/Reel  
 Reel  $\varnothing$ 330 mm = 10.000 Pieces/Reel



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