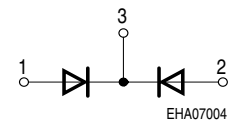
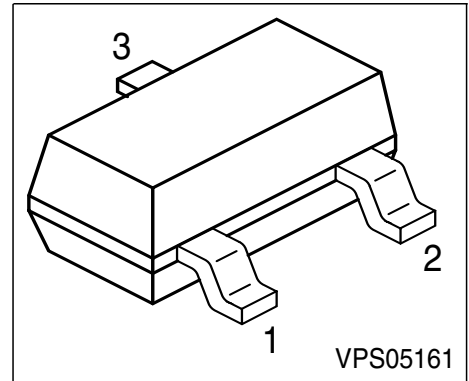


Silicon Variable Capacitance Diode

- 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



Type	Marking	Pin Configuration			Package
BB 804	SFs	1 = A1	2 = A2	3=C1/2	SOT-23

Maximum Ratings

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}	100	°C
Storage temperature	T_{stg}	-55 ... 150	

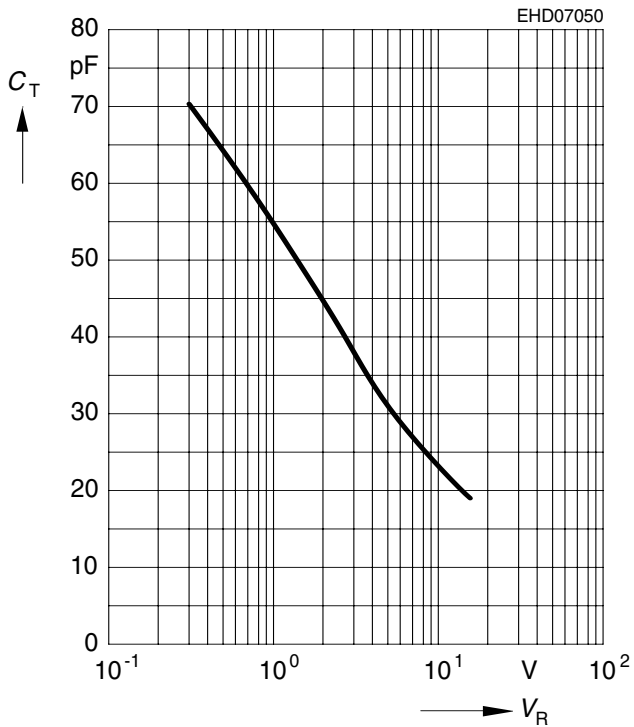
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current $V_R = 16\text{ V}$	I_R	-	-	20	nA
Reverse current $V_R = 16\text{ V}, T_A = 65^\circ\text{C}$	I_R	-	-	200	
AC characteristics					
Diode capacitance $V_R = 2\text{ V}, f = 1\text{ MHz}$	C_T	42	-	47.5	pF
Capacitance ratio $V_R = 2\text{ V}, V_{R8} = 8\text{ V}, f = 1\text{ MHz}$	C_{T2}/C_{T8}	1.65	1.71	-	-
Series resistance $V_R = 2\text{ V}, f = 100\text{ MHz}$	r_s	-	0.18	-	Ω
Q factor $V_R = 2\text{ V}, f = 100\text{ MHz}$	Q	-	200	-	-
Temperatur coefficient of C_T $V_R = 2\text{ V}, f = 1\text{ MHz}$	T_{Cc}	-	330	-	ppm/K
Diode capacitance ¹⁾ $V_R = 2\text{ V}, f = 1\text{ MHz}$ Subgroup: 0	C_T				pF
1		42	-	43.5	
2		43	-	44.5	
3		44	-	45.5	
4		45	-	46.5	
		46	-	47.5	

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

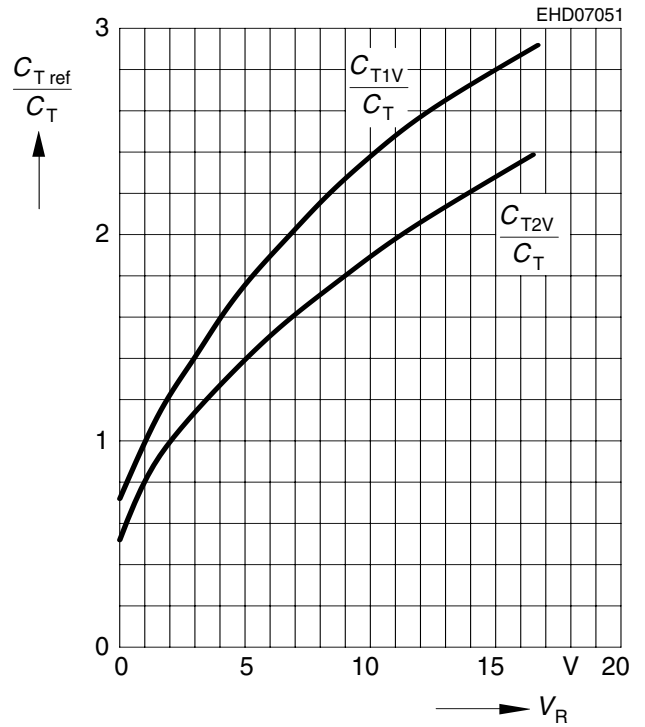
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



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

per diode, $V_{ref} = \text{parameter}$, $f = 1\text{MHz}$



Temperature coefficient $TC_C = f(V_R)$,

per diode, $f = 1\text{MHz}$

