

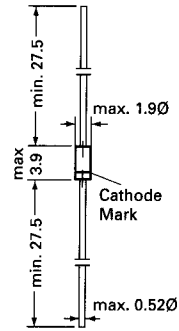
BB221, BB222

Tuner Diodes

Silicon Epitaxial Planar Capacitance Diodes with very wide effective capacitance variation for tuning the whole range of VHF or UHF television bands.

These diodes are available as singles or as matched sets of two or more units according to the tracking condition described below.

The diodes are delivered taped.
Details see "Taping".

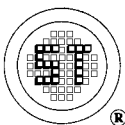


Glass case JEDEC DO-35
54 A 2 according to DIN 41 880

Weight approx. 0.13 g
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

	Symbol	Value	Unit
Reverse Voltage	V_R	32	V
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$



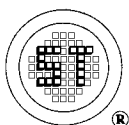
SEMTECH ELECTRONICS LTD.
(wholly owned subsidiary of HONEY TECHNOLOGY LTD.)



BB221, BB222

Characteristics at $T_{amb} = 25\text{ }^{\circ}\text{C}$

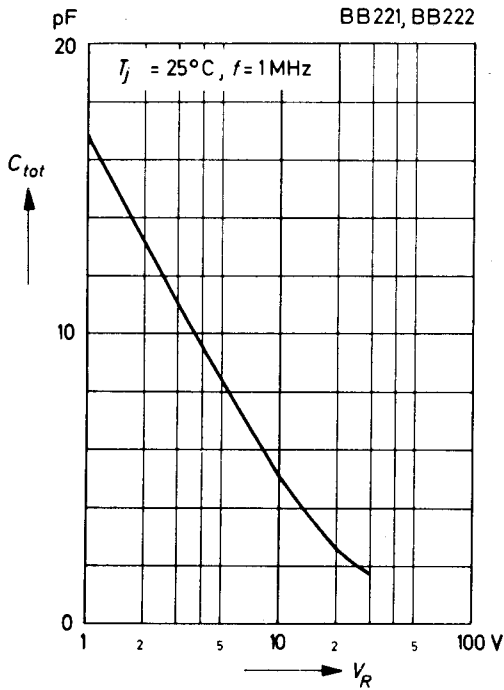
		Symbol	Min.	Typ.	Max.	Unit
Capacitance at $V_R = 1\text{ V}$ at $V_R = 3\text{ V}$ at $V_R = 28\text{ V}$	BB221 BB222	C_{tot}	-	17	-	pF
		C_{tot}	-	11	-	pF
		C_{tot}	1.8	-	2.2	pF
		C_{tot}	1.8	-	2.5	pF
Effective Capacitance Ratio at $V_R = 1\text{ to }28\text{ V}$	BB221	$\frac{C_{tot}(1V)}{C_{tot}(28V)}$	8	-	9.5	-
	BB222	$\frac{C_{tot}(1V)}{C_{tot}(28V)}$	7.3	-	9.5	-
Series Resistance at $f = 470\text{ MHz}$, $C_{tot} = 9\text{ pF}$	BA221	r_s	-	0.55	0.7	Ω
	BA222	r_s	-	0.8	1	Ω
Cutoff Frequency for $Q = 1$ at $V_R = 3\text{ V}$	BA221	f_{Q1}	-	24	-	GHz
	BA222	f_{Q1}	-	16	-	GHz
Series Resonance Frequency at $V_R = 25\text{ V}$	BA221	f_0	-	2	-	GHz
	BA222	f_0	-	1.8	-	GHz
Series Inductance measured in 1.5 mm Distance from case		L_s	-	2.5	-	nH
Leakage Current at $V_R = 30\text{ V}$		I_R	-	-	30	nA
Reverse Breakdown Voltage at $I_R = 10\text{ }\mu\text{A}$		$V_{(BR)R}$	32	-	-	V
For any two diodes of a matched group the following tracking condition applies: In the reverse bias voltage range of $V_R = 0.5\text{ V}$ to $V_R = 28\text{ V}$ the maximum capacitance deviation is 2.5 %.						



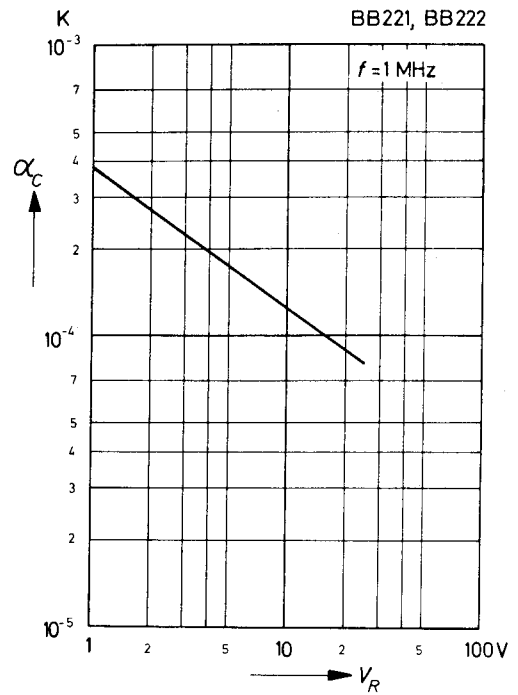
SEMTECH ELECTRONICS LTD.
(wholly owned subsidiary of HONEY TECHNOLOGY LTD.)



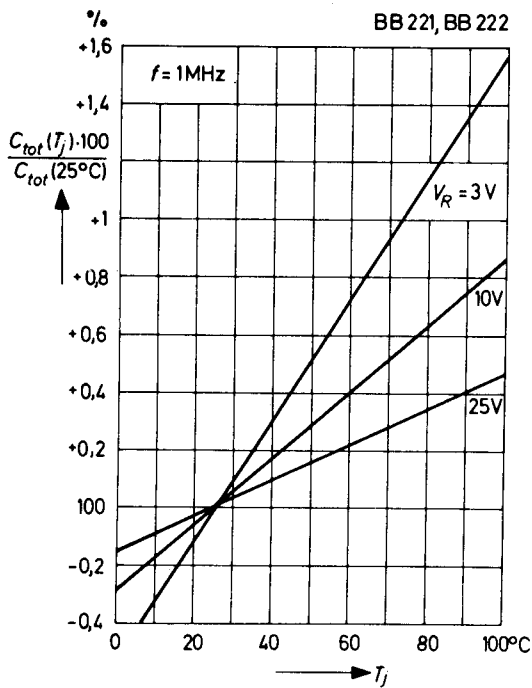
Capacitance versus reverse voltage



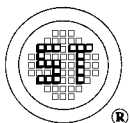
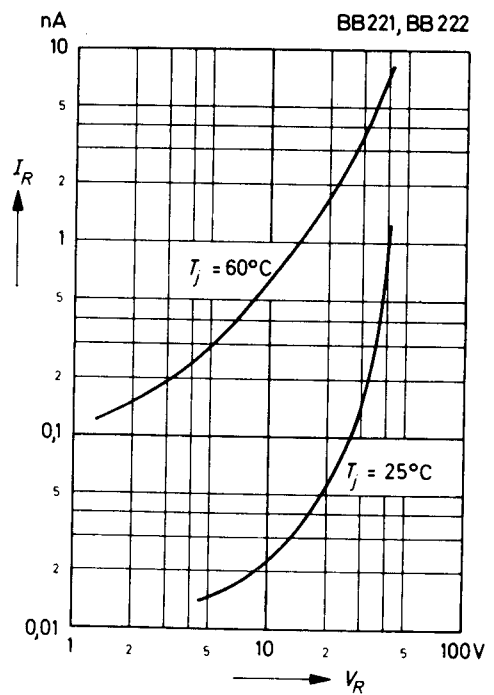
Temperature coefficient of capacitance versus reverse voltage



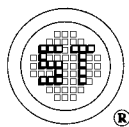
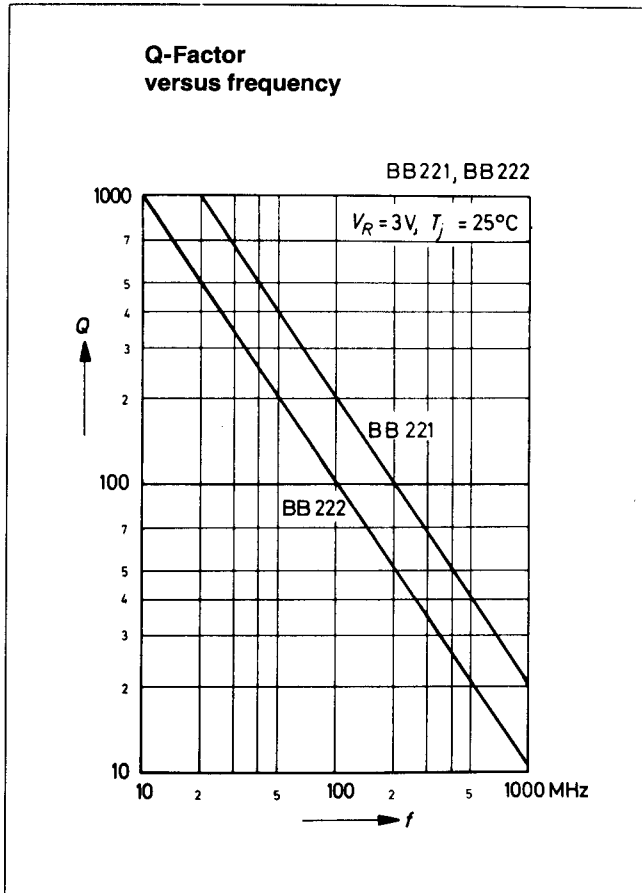
Relative capacitance versus junction temperature



Leakage current versus reverse voltage



BB221, BB222



SEMTECH ELECTRONICS LTD.
(wholly owned subsidiary of HONEY TECHNOLOGY LTD.)

