

BB221, BB222

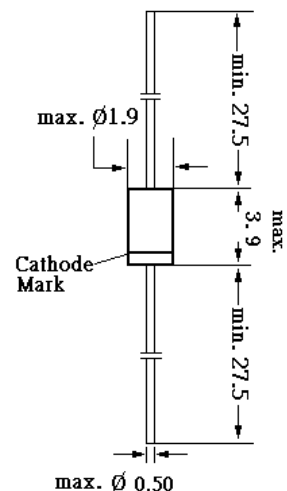
TUNER DIODES

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.

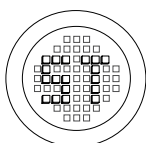
Details see "Taping".



Glass case JEDEC DO-35
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	$^\circ\text{C}$



®

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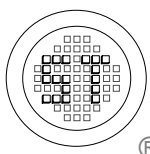
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Characteristics at $T_j = 25^\circ\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Leakage Current at $V_R = 30\text{V}$	I_R	-	-	30	nA
Capacitance at $V_R = 1\text{V}$	C_{tot}	-	17	-	pF
at $V_R = 3\text{V}$	C_{tot}	-	11	-	pF
at $V_R = 28\text{V}$	BA221 C_{tot}	1.8	-	2.2	pF
	BA222 C_{tot}	1.8	-	2.5	pF
Effective Capacitance Ratio at $V_R = 1$ to 28V	BA221 $\frac{C_{\text{tot}}(1\text{V})}{C_{\text{tot}}(28\text{V})}$	8	-	9.5	-
	BA222 $\frac{C_{\text{tot}}(1\text{V})}{C_{\text{tot}}(28\text{V})}$	7.3	-	9.5	-
Series Resistance at $f = 470\text{MHz}$, $C_{\text{tot}} = 9\text{pF}$	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_o	-	2	-	GHz
	BA222 f_o	-	1.8	-	GHz
Series Inductance measured in 1.5 mm Distance from case	L_S	-	2.5	-	nH
Reverse Breakdown Voltage at $I_R = 10\mu\text{A}$	$V_{(\text{BR})R}$	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.

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ISO/TS 16949 : 2002
Certificate No. 05103



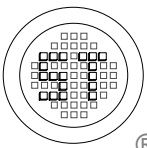
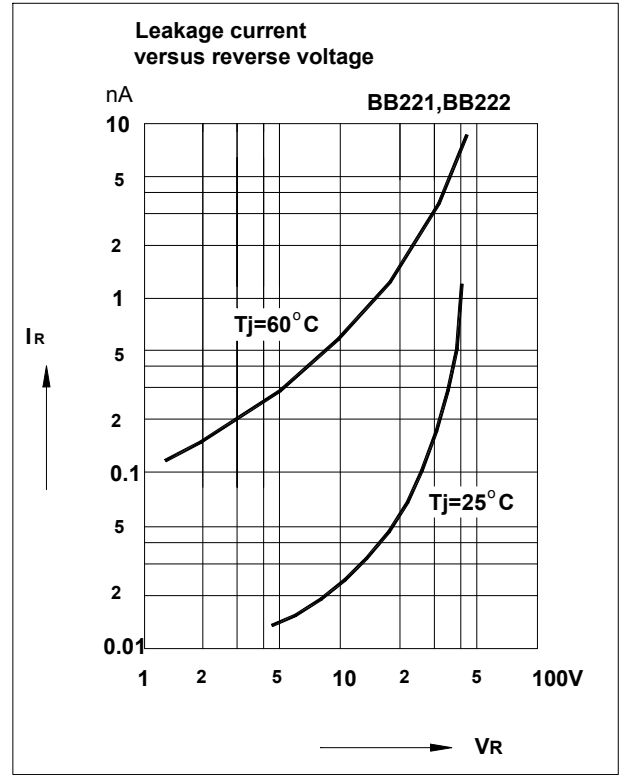
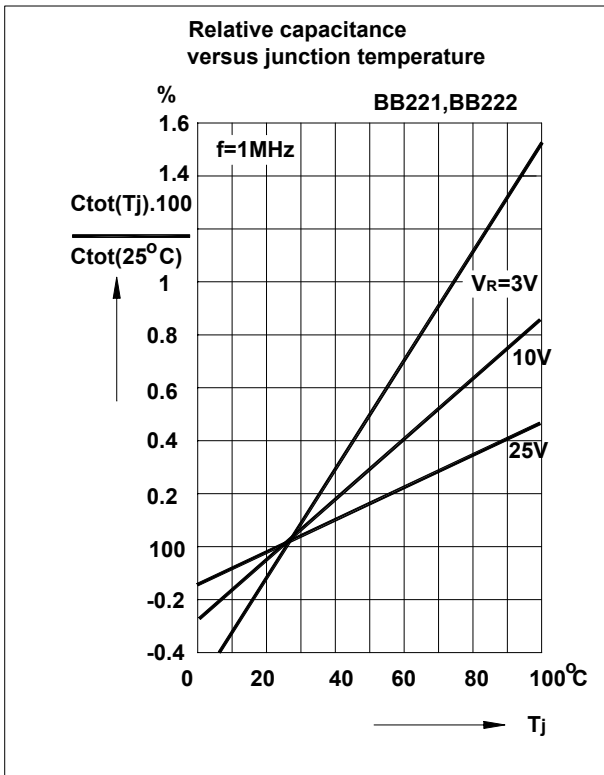
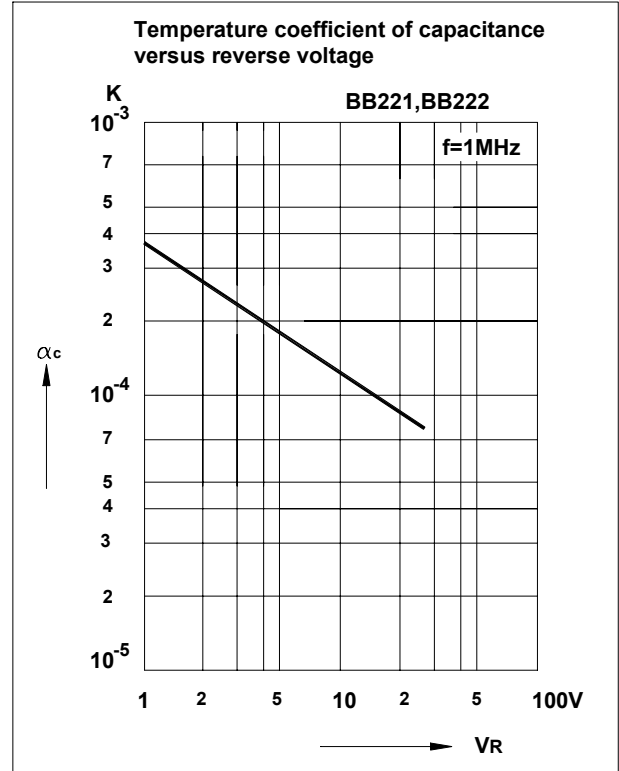
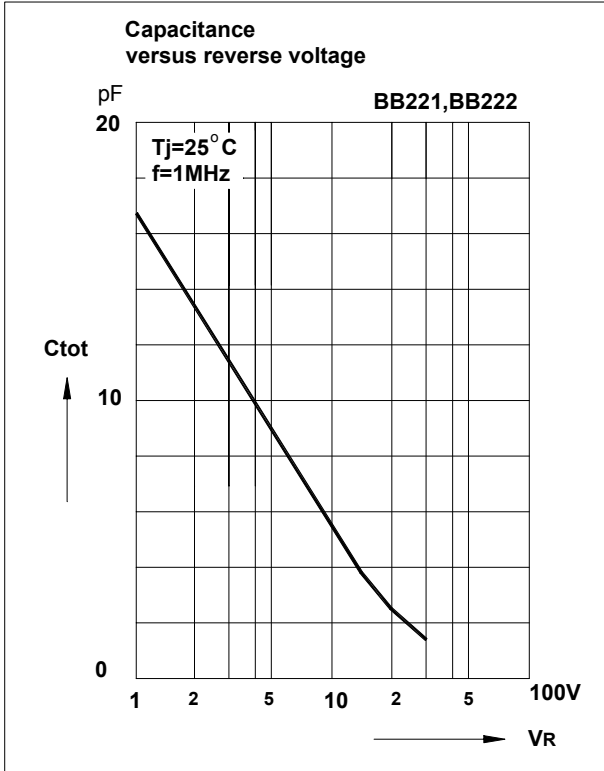
ISO 14001
Certificate No. 7116



ISO 9001 : 2000
Certificate No. 550-159-04-002-04

Dated : 31/12/2002

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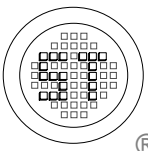
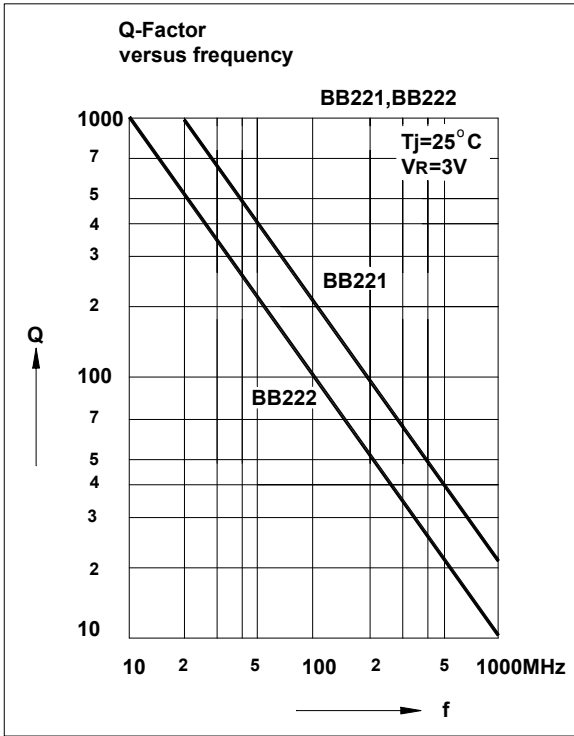


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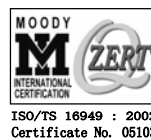
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