

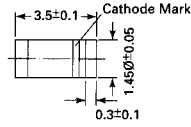
# BB629

## Tuner Diodes

Silicon Epitaxial Planar Capacitance Diodes in MiniMelf case especially suited for automatic insertion with very wide effective capacitance variation for tuning the whole VHF range in TV receivers, also suited for CTV.

These diodes are delivered matched according to the tracking condition described below.

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

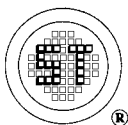


Glass case MiniMELF

Weight approx. 0.05g  
Dimensions in mm

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

	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	$^\circ\text{C}$

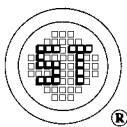


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**Characteristics at  $T_{amb} = 25\text{ }^{\circ}\text{C}$**

	Symbol	Min.	Typ.	Max.	Unit
Capacitance at $f = 1\text{ MHz}$ at $V_R = 1\text{ V}$ at $V_R = 28\text{ V}$	$C_{tot}$	-	35	-	pF
	$C_{tot}$	2.5	-	3.2	pF
Effective Capacitance Ratio at $V_R = 1$ to $28\text{ V}$	$\frac{C_{tot}(1V)}{C_{tot}(28V)}$	12	-	-	-
Series Resistance (at $f = 330\text{ MHz}$ , $C_{tot} = 25\text{ pF}$ )	$r_s$	-	0.85	-	$\Omega$
Q-Factor at $f = 50\text{ MHz}$ , $V_R = 3\text{ V}$ at $f = 300\text{ MHz}$ , $C_{tot} = 25\text{ V}$	Q	-	180	-	-
	Q	-	250	-	-
Cutoff Frequency for $Q = 1$ at $V_R = 3\text{ V}$	$f_{Q1}$	-	9	-	GHz
Series Resonance Frequency at $V_R = 25\text{ V}$	$f_0$	-	2	-	GHz
Series Inductance	$L_s$	-	2	-	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
<p>For any two diodes of a matched group the following tracking condition applies:                      In the reverse bias voltage range of <math>V_R = 0.5\text{ V}</math> to <math>V_R = 28\text{ V}</math> the maximum capacitance deviation is 2.5 %.</p>					

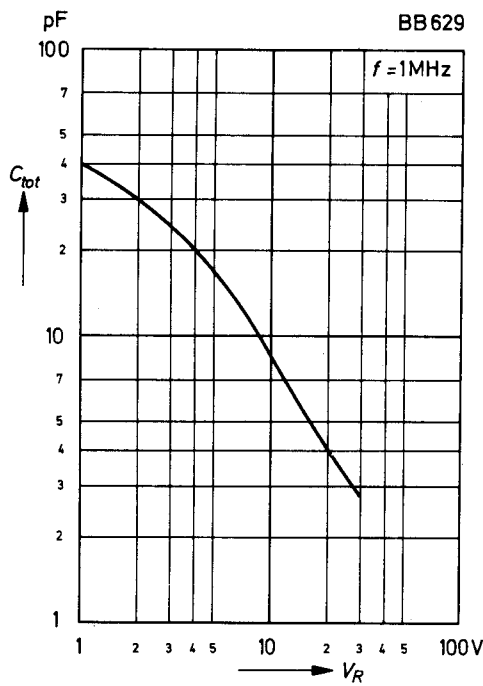


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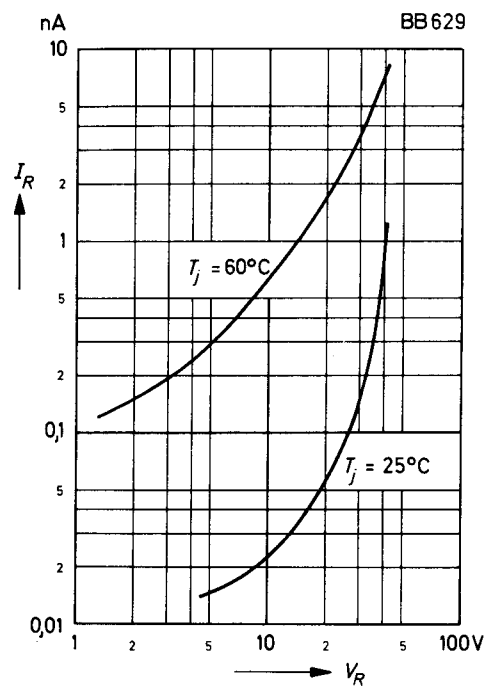
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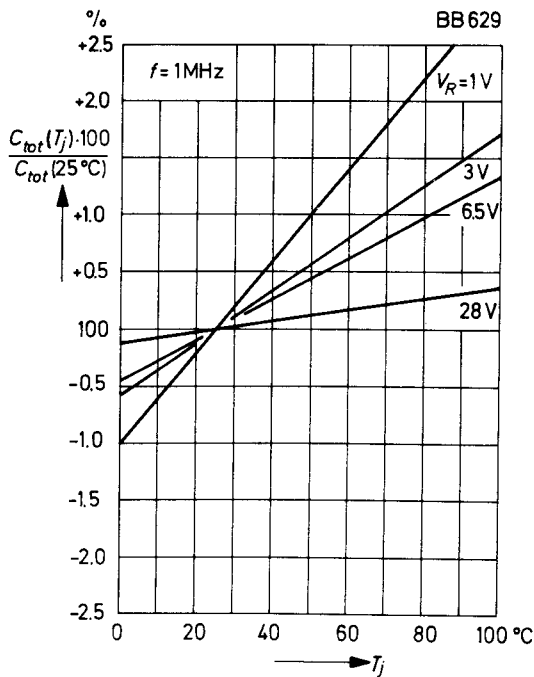
Capacitance versus reverse voltage



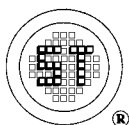
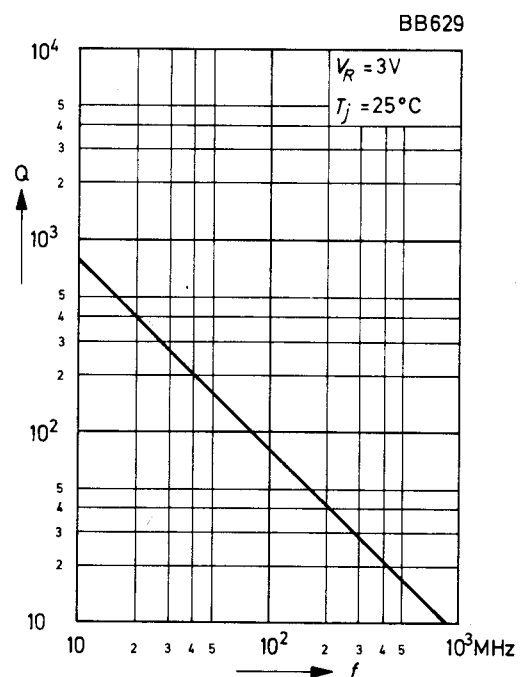
Leakage current versus reverse voltage



Relative capacitance versus junction temperature



Q-Factor versus frequency





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