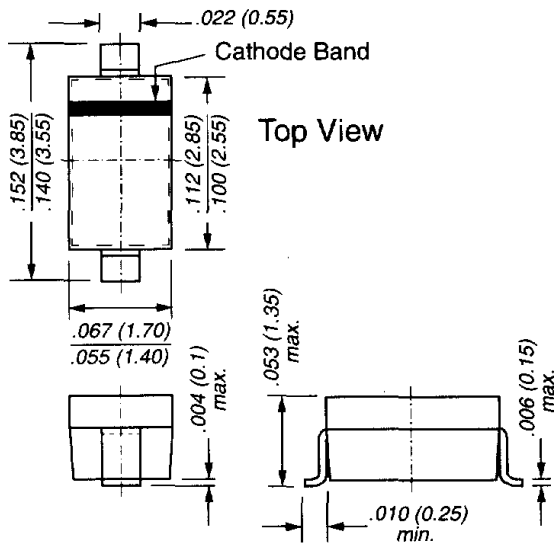
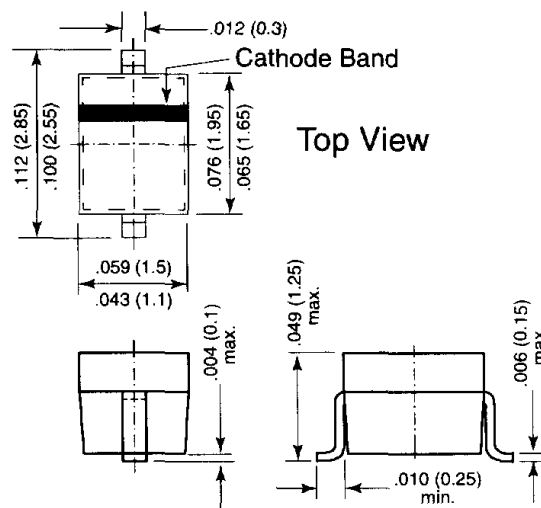




## SOD-123 (BB729)

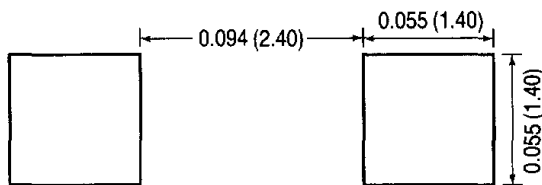


## SOD-323 (BB729S)

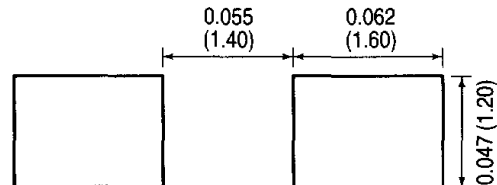


Dimensions in inches and (millimeters)

### Mounting Pad Layout SOD-123 (BB729)



### Mounting Pad Layout SOD-323 (BB729S)



## Features

- Silicon epitaxial planar capacitance diodes with very wide effective capacitance variation for tuning the whole range of VHF CTV tuners.
- These diodes are available as singles or as matched sets of two or more units according to the tracking condition described in the table of characteristics.
- This diode is also available in SOD-323 case with the type designation BB729S.

## Mechanical Data

**Case:** BB729 = SOD-123 Plastic Case  
BB729S = SOD-323 Plastic Case

**Weight:** BB729 = approx. 0.01g  
BB729S = approx. 0.004g

### Packaging Codes/Options:

- SOD-123: D3/10K per 13" reel (8mm tape), 30K/box
- D4/3K per 7" reel (8mm tape), 30K/box
- SOD-323: D5/10K per 13" reel (8mm tape), 30K/box
- D6/3K per 7" reel (8mm tape), 30K/box

## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	32	V
Junction Temperature	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>S</sub>	-55 to +125	°C

4/28/00

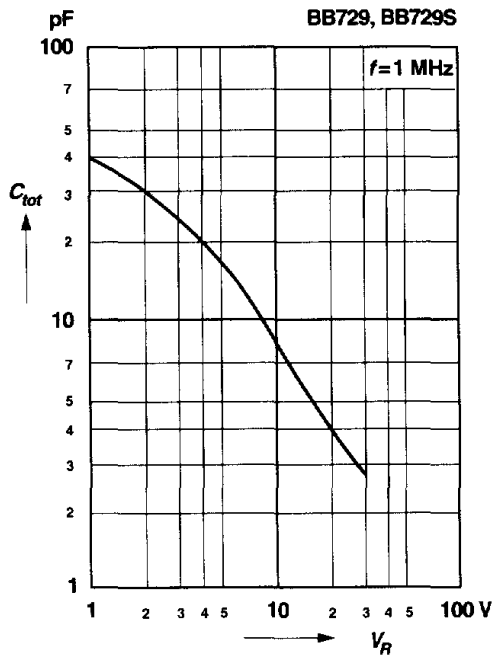
**Electrical Characteristics** (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage at I <sub>R</sub> = 100μA	V <sub>(BR)R</sub>	32	–	–	V
Leakage Current at V <sub>R</sub> = 30V	I <sub>R</sub>	–	–	10	nA
Capacitance f = 1MHz at V <sub>R</sub> = 28V at V <sub>R</sub> = 25V at V <sub>R</sub> = 2V	C <sub>tot</sub>	2.38 2.68 26.9	–	2.93 3.12 33.1	pF
Effective Capacitance Ratio f = 1MHz at V <sub>R</sub> = 1 to 28V	$\frac{C_{tot}(1V)}{C_{tot}(28V)}$	12	–	–	–
at V <sub>R</sub> = 2 to 25V	$\frac{C_{tot}(2V)}{C_{tot}(25V)}$	10	–	11	–
Series Resistance at f = 470 MHz, C <sub>tot</sub> = 14 pF	r <sub>s</sub>	–	–	0.8	Ω
Series Inductance	L <sub>s</sub>	–	2.5	–	nH

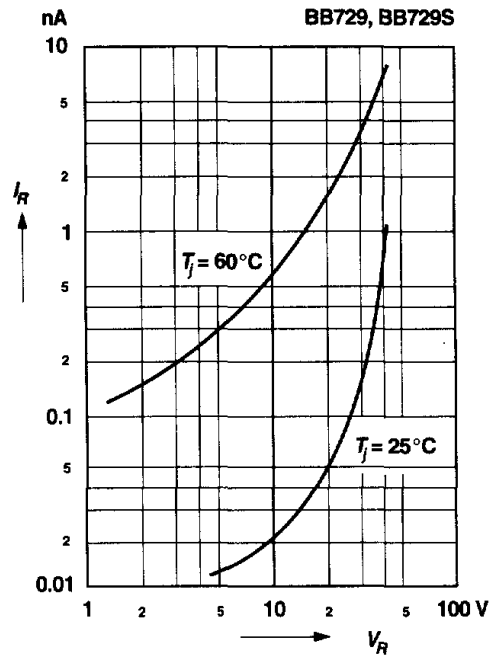
For any two of six consecutive diodes in the carrier tape, the maximum capacitance deviation in the reverse bias voltage of V<sub>R</sub> = 0.5 to 28V is 3%

## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

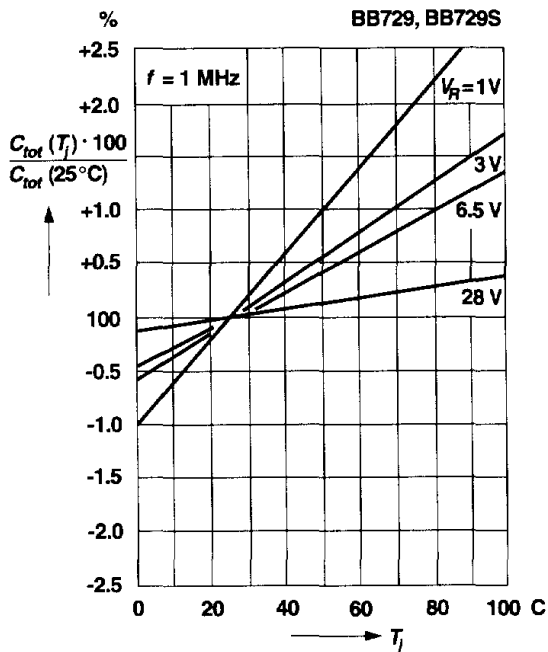
Capacitance versus reverse voltage



Leakage current versus reverse voltage



Relative capacitance versus junction temperature



Q-Factor versus frequency

