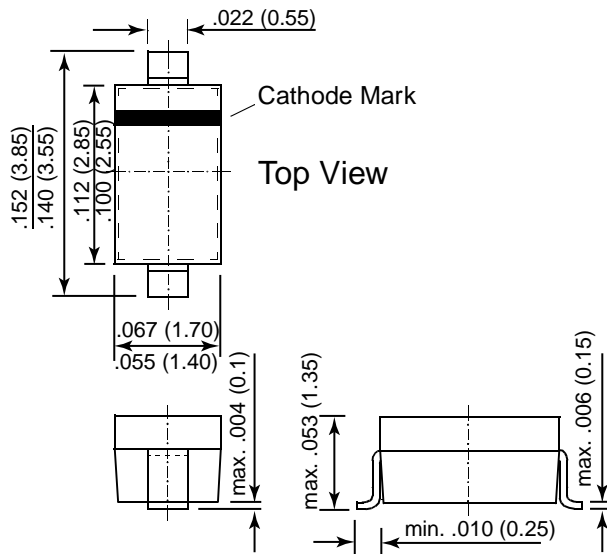
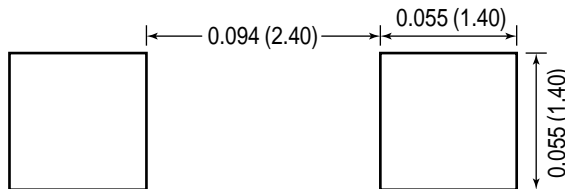




SOD-123 (BB731)



Mounting Pad Layout SOD-123 (BB731)

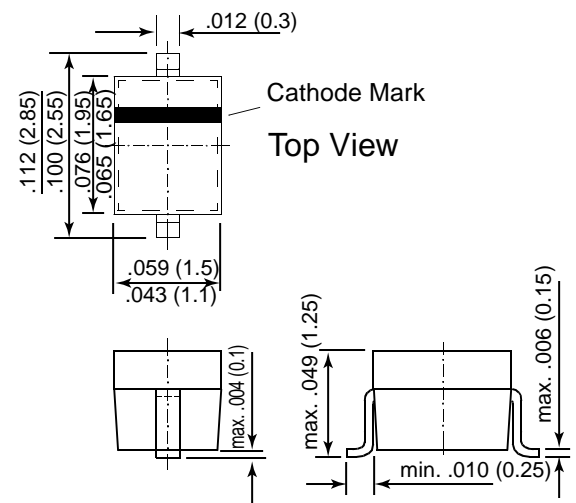


Features

- Silicon epitaxial planar capacitance diodes with very wide effective capacitance variation for tuning the VHF range 41 ... 170 MHz in hyperband television 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.

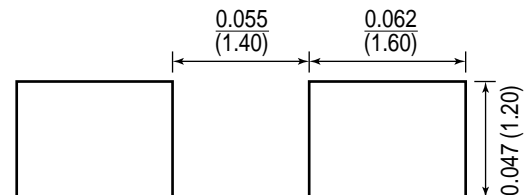


SOD-323 (BB731S)



Dimensions in inches and (millimeters)

Mounting Pad Layout SOD-323 (BB731S)



Mechanical Data

BB731

Case: SOD-123 plastic case

Weight: approximately 0.01 grams

BB731S

Case: SOD-323 plastic case

Weight: approximately 0.004 grams

Maximum Ratings and Thermal Characteristics (T_c = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse Voltage	V _R	32	V
Junction Temperature	T _J	125	°C
Storage Temperature Range	T _S	-55 to +125	°C

Electrical Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage at I _R = 100μA	V _{(BR)R}	32	–	–	V
Leakage Current at V _R = 30V	I _R	–	–	30	nA
Capacitance f = 1MHz at V _R = 28V at V _R = 25V at V _R = 1V	C _{tot}	3.15 – –	– 3.5 50	3.55 – –	pF
Effective Capacitance Ratio f = 1MHz at V _R = 1 to 28V	$\frac{C_{tot}(1V)}{C_{tot}(28V)}$	19.5	–	25	–
at V _R = 3 to 25V	$\frac{C_{tot}(3V)}{C_{tot}(25V)}$	–	14	–	–
Series Resistance at f = 300 MHz, C _{tot} = 25 pF	r _s	–	0.9	1.0	Ω
Series Inductance	L _s	–	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_R = 0.5 to 28V is 3%

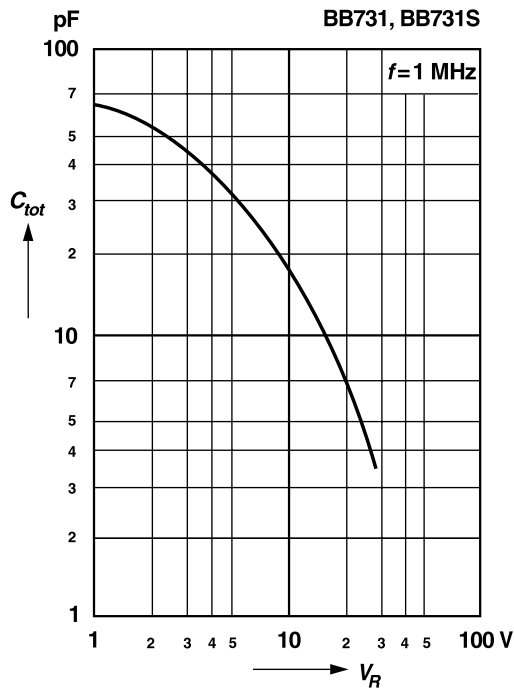
Packaging/Ordering Information

Part Number	Packaging Code	Package Type	Standard Reel Quantity
BB731	D3	13" Reel	10,000 pcs.
	D4	7" Reel	3,000 pcs.
BB731S	D5	13" Reel	10,000 pcs.
	D6	7" Reel	3,000 pcs.

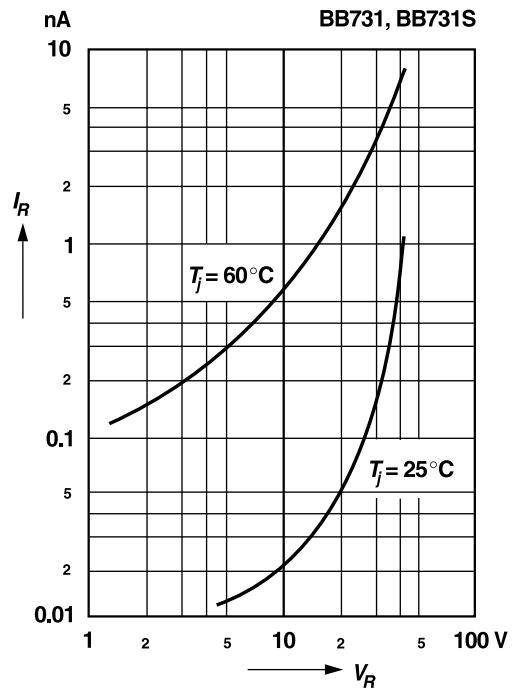
Example: BB731/D3

Ratings and Characteristics

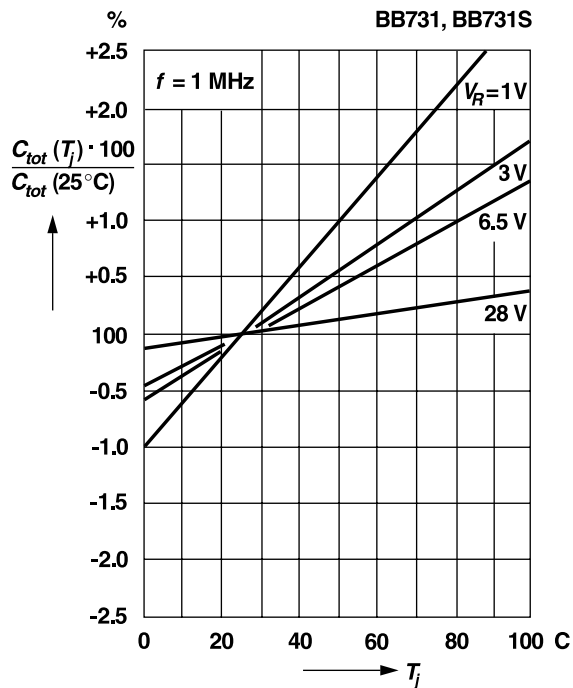
Capacitance versus reverse voltage



Leakage current versus reverse voltage



Relative capacitance versus junction temperature



Q-Factor versus frequency

