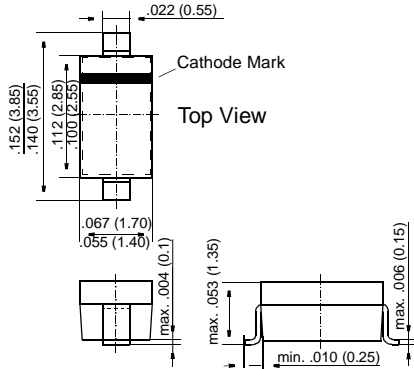


BB731

Tuner Diodes

SOD-123



Dimensions in inches and (millimeters)

FEATURES

- ◆ Silicon epitaxial planar capacitance diodes with very wide effective capacitance variation for tuning the VHF range 41 ... 170 MHz in hyper-band 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.
- ◆ This diode is also available in SOD-323 case with the type designation BB731S.



MECHANICAL DATA

Case: SOD-123 Plastic Case

Weight: approx. 0.01 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Reverse Voltage	V_R	32	V
Ambient Temperature	T_{amb}	125	°C
Storage Temperature Range	T_S	-55 to +125	°C

BB731

ELECTRICAL CHARACTERISTICS

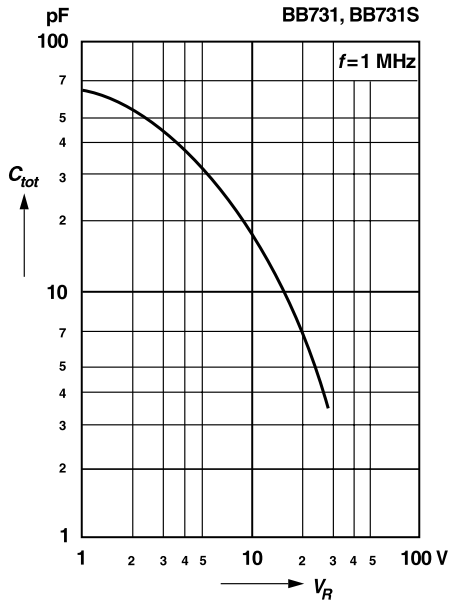
Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	32	–	–	V
Leakage Current at $V_R = 30 \text{ V}$	I_R	–	–	10	nA
Capacitance, $f = 1 \text{ MHz}$ at $V_R = 28 \text{ V}$ at $V_R = 1 \text{ V}$	C_{tot} C_{tot}	2.9 62.0	– –	3.4 76.0	pF pF
Effective Capacitance Ratio, $f = 1 \text{ MHz}$ at $V_R = 1 \text{ to } 28 \text{ V}$	$\frac{C_{\text{tot}}(1 \text{ V})}{C_{\text{tot}}(28 \text{ V})}$	19.5	–	–	–
Series Resistance at $f = 300 \text{ MHz}$, $C_{\text{tot}} = 25 \text{ pF}$	r_s	–	1.0	–	Ω
Series Inductance	L_s	–	2.5	–	nH

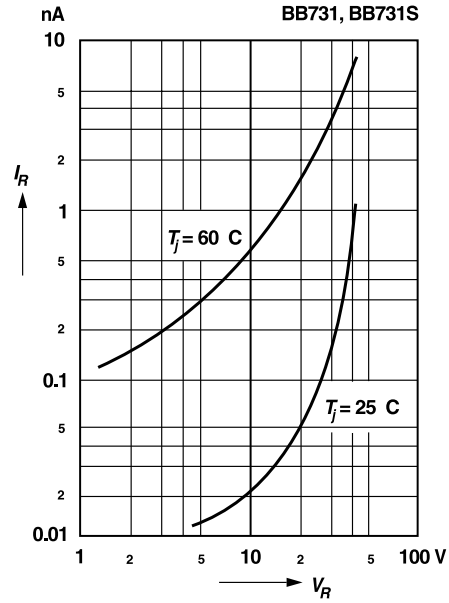
For any two of six consecutive diodes in the carrier tape, the maximum capacitance deviation in the reverse bias voltage of $V_R = 0.5 \text{ to } 28 \text{ V}$ is max. 2.5%

RATINGS AND CHARACTERISTIC CURVES BB731

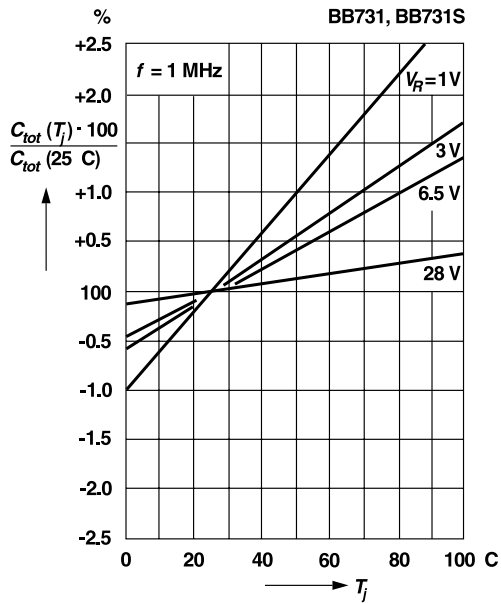
Capacitance versus reverse voltage



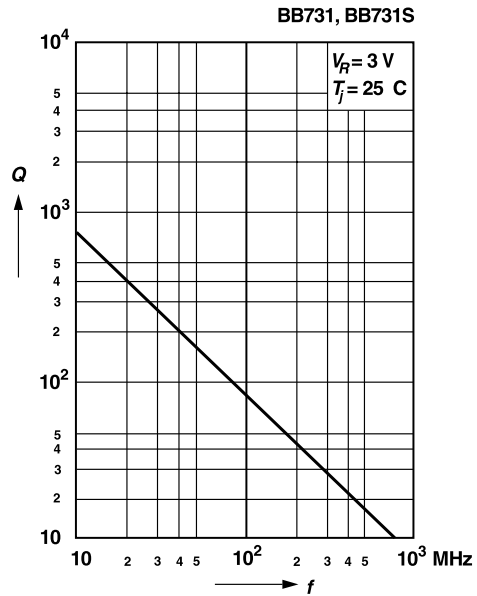
Leakage current versus reverse voltage



Relative capacitance versus junction temperature



Q-Factor versus frequency





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