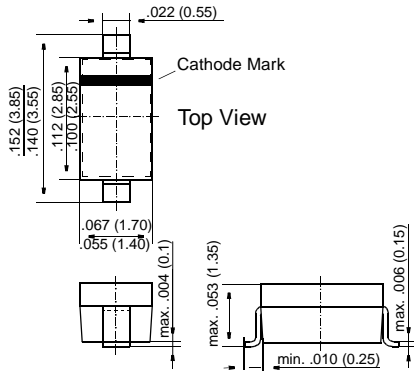


BB721


Tuner Diodes

SOD-123



Dimensions in inches and (millimeters)

FEATURES

- ◆ Silicon epitaxial planar capacitance diodes with very wide effective capacitance variation for tuning the whole range of UHF television bands.
- ◆ Two BB721/BB721S tuner diodes in series are used for direct satellite receivers. 
- ◆ 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 BB721S.

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

BB721

ELECTRICAL CHARACTERISTICS

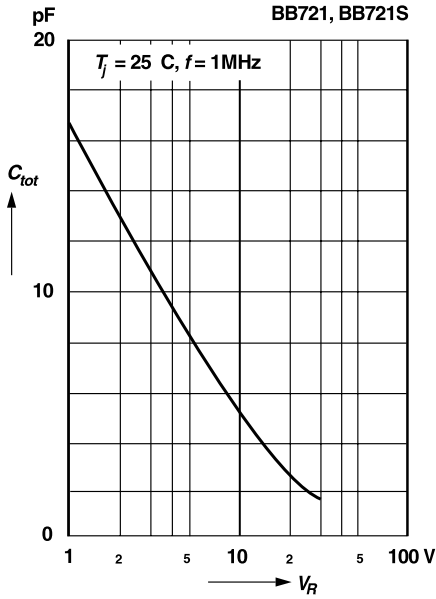
Ratings at 25 °C ambient temperature unless otherwise specified

	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}	1.9 17.5	– –	2.3 20	pF pF
Effective Capacitance Ratio, $f = 1 \text{ MHz}$ at $V_R = 1 \text{ to } 28 \text{ V}$	$\frac{C_{\text{tot}}(1 \text{ V})}{C_{\text{tot}}(28 \text{ V})}$	8.2	–	9.8	–
Series Resistance at $f = 470 \text{ MHz}$, $C_{\text{tot}} = 14 \text{ pF}$	r_s	–	0.55	–	Ω
Series Inductance	L_s	–	2.5	–	nH

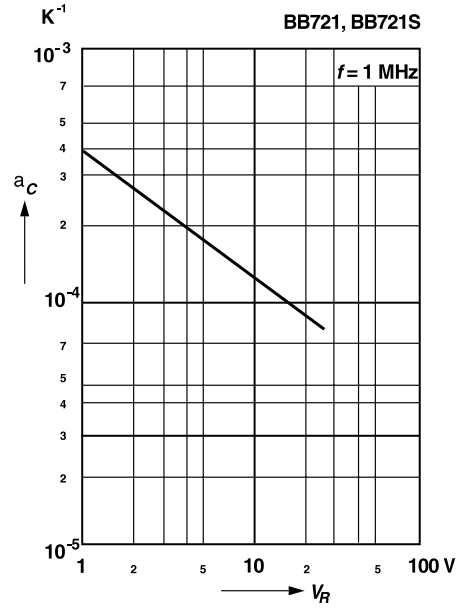
For any two of six consecutive diodes in the carrier tape, the maximum capacitance deviation in the reverse bias voltage of $V_R = 0.5 \text{ to } 28 \text{ V}$ is max. 2.5%.

RATINGS AND CHARACTERISTIC CURVES BB721

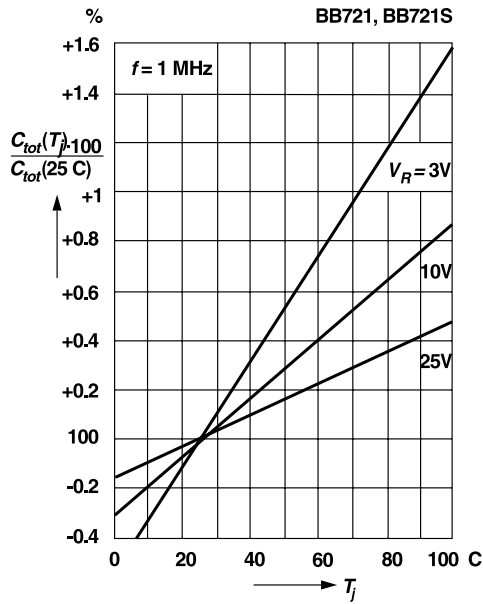
Capacitance versus reverse voltage



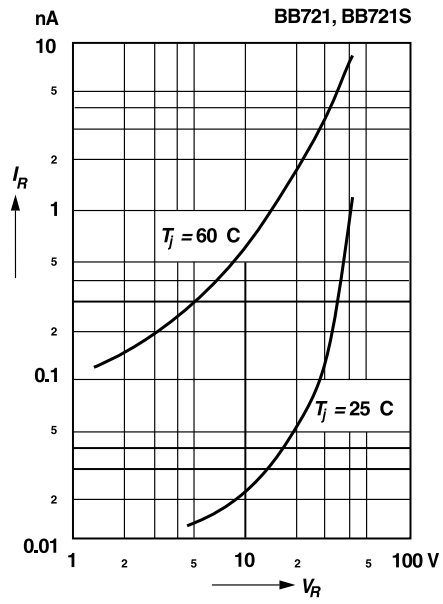
Temperature coefficient of capacitance versus reverse voltage



Relative capacitance versus junction temperature



Leakage current versus reverse voltage



RATINGS AND CHARACTERISTIC CURVES BB721

Q-Factor
versus frequency

