

VHF VARIABLE CAPACITANCE DIODES

FEATURES

- Excellent linearity
- Matched to 2.5%
- C28:2.5:ratio:16
- Low series resistance

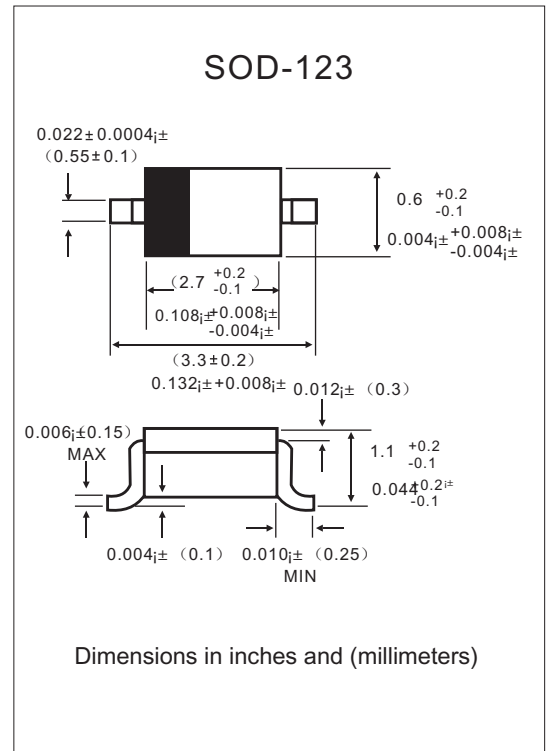
APPLICATIONS

Electronic tuning in VHF television tuners, band B up to 460 Mhz

DESCRIPTION

The BB910 is a variable capacitance diode, fabricated in planar technology.

Bb910



LIMITING VALUES

	Symbol	Min.	Max.	Units
Continuous Reverse Voltage	V_R		30	V
Forward Continuous Current at $T_A=25^\circ\text{C}$	I_F		20	mA
Junction Temperature	T_j	-55	+100	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55	+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse current	I_R	$V_R=28\text{V}$; see Fig.2			10	nA
		$V_R=28\text{V}$; $T_j=85^\circ\text{C}$ see Fig.2			200	nA
Diode series resistance	R_D	$F=100\text{MHz}$; note1			1	Ω
Diode capacitance	C_d	$V_R=0.5\text{V}$; $f=1\text{MHz}$ see Fig.1 and 3	38			pF
		$V_R=28\text{V}$; $f=1\text{MHz}$ see Fig.1 and 3	2.3		2.7	pF
Capacitance ratio	$\frac{C_d(0.5\text{V})}{C_d(28\text{V})}$	$F=1\text{MHz}$	14			
Capacitance matching	$\frac{\Delta C_d}{C_d}$	$V_R=0.5\text{V}$ to 28V			2.5	%

NOTE:

1. V_R is the value at which $C_d=40\text{pF}$

RATINGS AND CHARACTERISTIC CURVES

FIG1: Diode capacitance as a function of reverse voltage; typical values

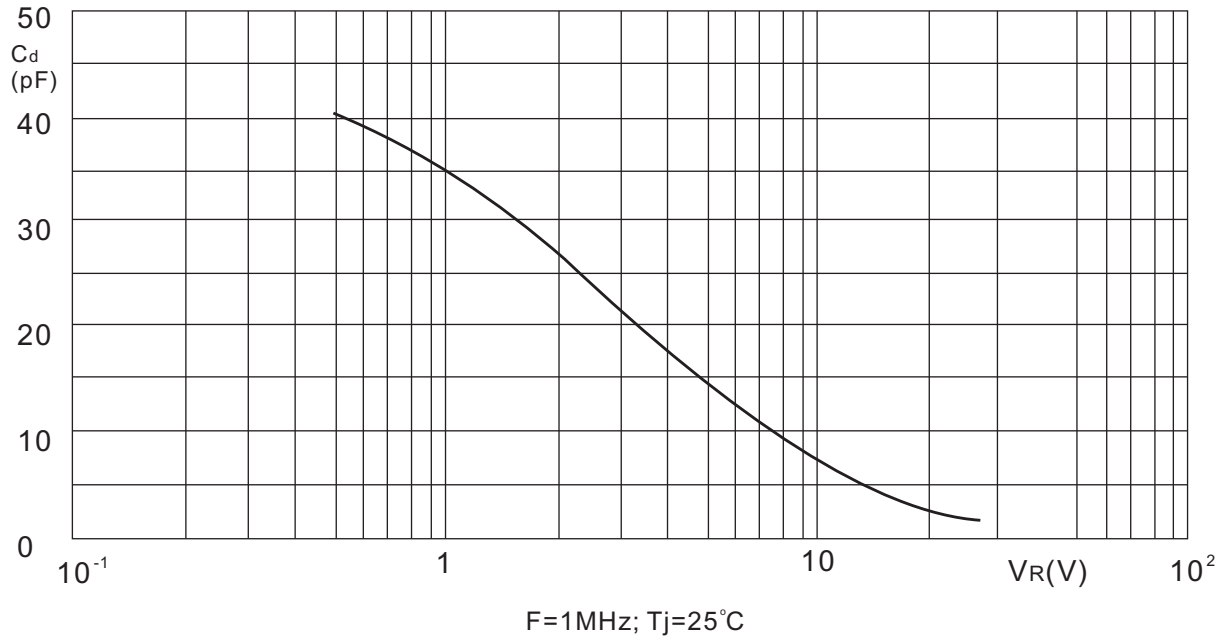


FIG2: Reverse current as a function of junction temperature; maximum values

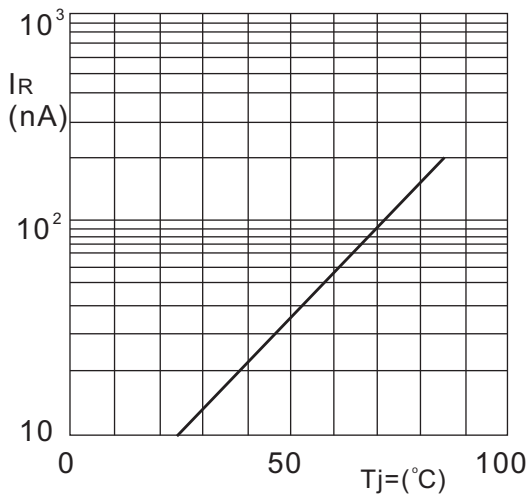


FIG3: Temperature coefficient of diode capacitance as a function of reverse voltage; typical values

