

VHF VARIABLE CAPACITANCE DIODES

FEATURES

Excellent linearity

Matched to 2.5%

C28:2.5:ratio:16

Low series resistance

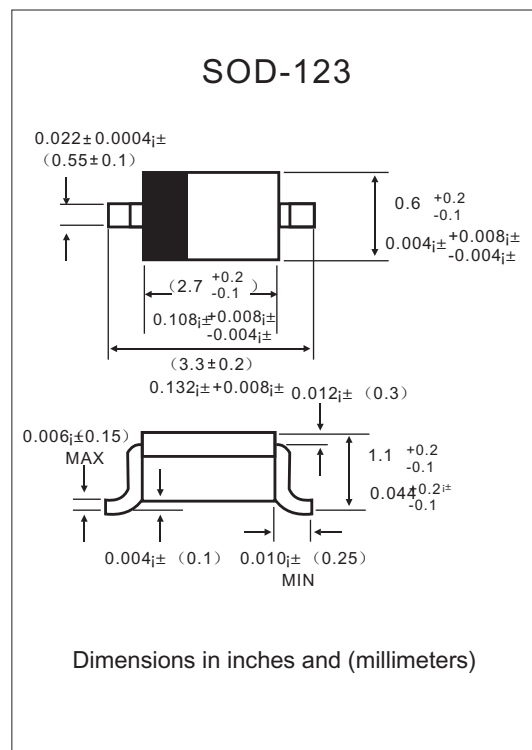
APPLICATIONS

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 =28V; see Fig.2			10	nA
		V _R =28V; T _j =85°C see Fig.2			200	nA
Diode serles resistance	R _D	F=100MHz; note 1			1	Ω
Diode capacitance	C _d	V _R =0.5V; f=1MHz see Fig.1 and 3	38			pF
		V _R =28V; f=1MHz see Fig.1 and 3	2.3		2.7	pF
Capacitance ratio	$\frac{C_d(0.5v)}{C_d(28v)}$	F=1MHz	14			
Capacitance matching	$\frac{\Delta C_d}{C_d}$	V _R =0.5V 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

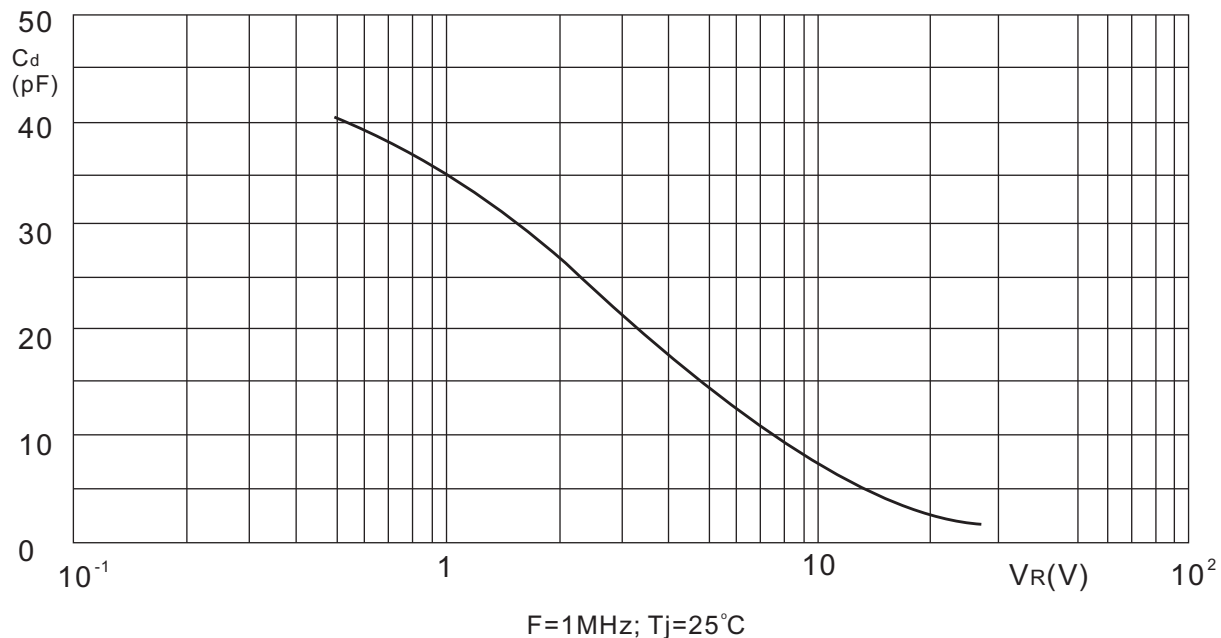


FIG2: Reverse current as a function of junction temperature; maximum values

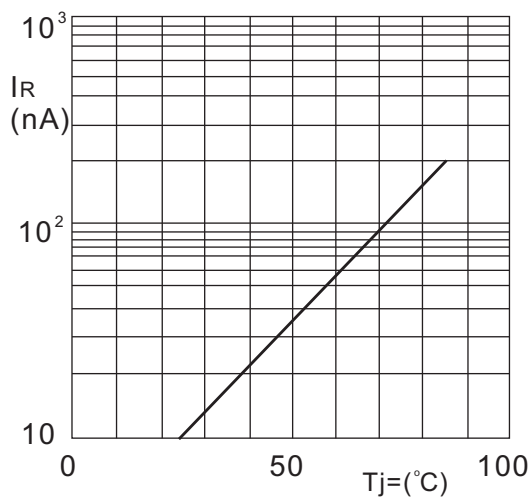


FIG3: Temperature coefficient of diode capacitance as a function of reverse voltage; typical values

