Silicon - Diode

BB121A

2.2 - 17pF

Varactor - Diode

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

BB121A · BB121B · BB122

UHF, VHF/FM VARACTOR DIODES

DIFFUSED SILICON PLANAR

- C_3/C_{25} . . . 4.5–6.0
- **MATCHED SETS** (Note 2)

ABSOLUTE MAXIMUM RATINGS (Note 1)

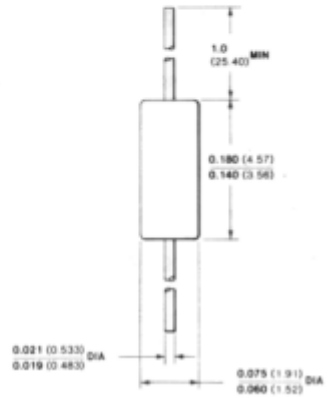
Temperatures

Storage Temperature Range	−55°C to +150°C
Maximum Junction Operating Temperature	+150°C
Lead Temperature	+260°C

Maximum Voltage

WIV	Working Inverse Voltage	30 V

DO-35 OUTLINE



NOTES:
Copper clad steel leads, tin plated
Gold plated leads available
Hermetically sealed glass package
Package weight is 0.14 gram

ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC		MIN	TYP	MAX	UNITS	TEST CONDITIONS
BV	Breakdown Voltage		30			V	I_R = 100 μA
I_R	Reverse Current			10	50	nA	V_R = 28 V
C	Capacitance	BB 121A		17		pF	V_R = 1.0 V, f = 1 MHz
				11		pF	V_R = 3.0 V, f = 1 MHz
			2.00	2.20	2.35	pF	V_R = 25 V, f = 1 MHz
		BB 121B		18		pF	V_R = 1.0 V, f = 1 MHz
				12		pF	V_R = 3.0 V, f = 1 MHz
			2.25	2.45	2.65	pF	V_R = 25 V, f = 1 MHz
		BB 122		20		pF	V_R = 1.0 V, f = 1 MHz
				13		pF	V_R = 3.0 V, f = 1 MHz
			2.10	2.45	2.80	pF	V_R = 25 V, f = 1 MHz
C_3/C_{25}	Capacitance Ratio		4.5	5.2	6.0		V_R = 3 V/25 V, f = 1 MHz
R_S	Series Resistance	BB 121A/B		0.6	0.8	Ω	C = 9 pF, f = 470 MHz
		BB 122		0.9	1.2	Ω	C = 9 pF, f = 470 MHz
f_o	Series Resonant Frequency	BB 121A/B		2.0		GHz	V_R = 25 V
		BB 122		1.8		GHz	V_R = 25 V
L_S	Series Inductance			2.5		nH	1.5 mm from case

NOTES:
1. These ratings are limiting values above which the serviceability of the diode may be impaired.
2. The capacitance difference between any two diodes in one set is less than 3% for the BB 121A and BB 121B and less than 6% for the BB 122 over the reverse voltage range of 0.5 V to 28 V.
3. For product family characteristic curves, refer to Chapter 4, D11.