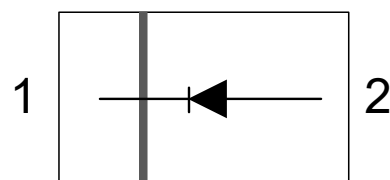


Features

- High capacitance ratio: $C_{0V} / C_{5V} = 3.4$ (typ.)
- Designed for high-volume, low-cost battery applications
- Available lead (Pb)-free and RoHS-compliant MSL-1 @ 260°C per JEDEC J-STD-020
- Available in tape and reel packaging
- Industry Standard DFN1x0.6-2L Package



Functional Block Diagram

Product Description

The YVC032P034R device is GaAs hyperabrupt junction varactor diodes specifically designed for VCOs applications, The specified high capacitance ratio and low R_s of YVC032P034R make it attractive for low phase noise VCOs in wireless systems up to and beyond 3.5GHz. Applications include low-noise and wideband UHF and VHF VCO for GSM, PCS, CDMA and analog phones.

Absolute Maximum Ratings

Characteristic	Rating	Unit
Forward current (I_F)	20	mA
Power dissipation (P_D)	250	mW
Storage temperature (T_{ST})	-55 to +150	°C
Operating temperature (T_{OP})	-55 to +125	°C
ESD human body model	Class1A	



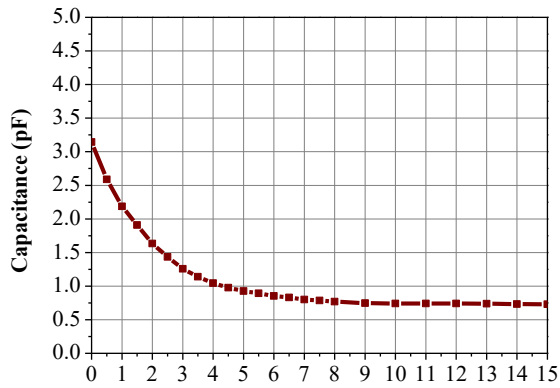
Caution!

Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability.

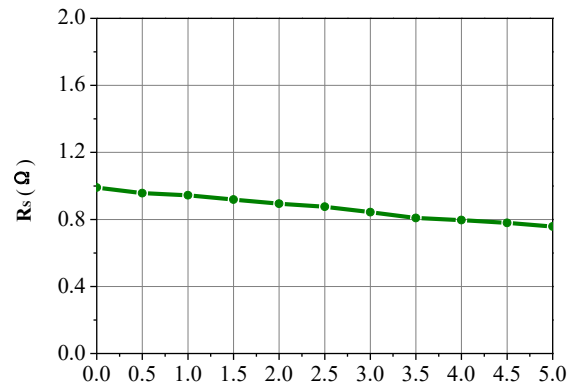
Electrical Specifications@25 °C

Parameter	Condition	Specification			Unit
		Min.	Typ.	Max.	
Reverse Current (I_R)	$V_R = 15\text{ V}$			20	nA
Capacitance (C_T)	$C_T @ 0.5\text{ V}, V_R = 0.5\text{ V}, F = 1\text{ MHz}$		2.59		pF
Capacitance (C_T)	$C_T @ 5\text{ V}, V_R = 5\text{ V}, F = 1\text{ MHz}$		0.93		pF
Capacitance Ratio (C_{TR})	$C_T (0.5\text{ V}) / C_T (5\text{ V})$		2.78		
Series Resistance (R_s)	$V_R = 1\text{ V}, F = 100\text{ MHz}$			0.94	Ω
Breakdown Voltage (V_{BR})	$I_R = 10\text{ }\mu\text{A}$	20			V

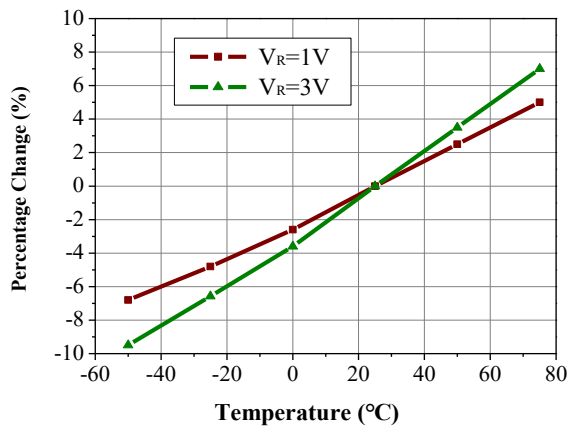
Typical Performance Data



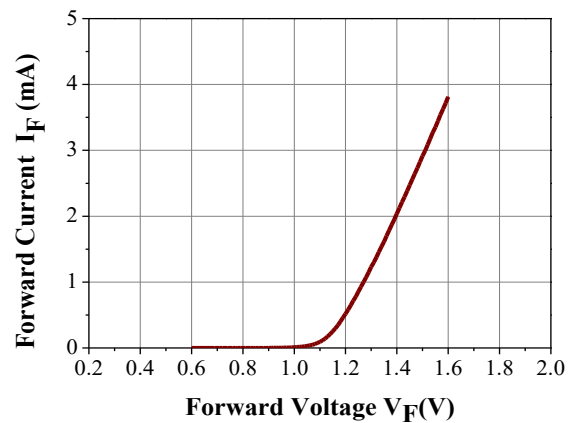
Capacitance vs. Reverse Voltage



**Series Resistance vs. Reverse Voltage
@ 100 MHz**



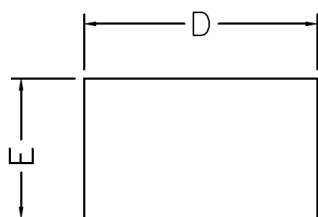
**Relative Capacitance Change
vs. Temperature**



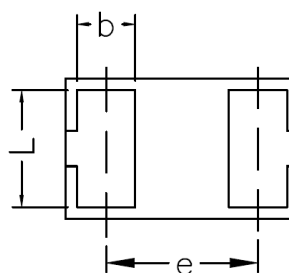
Forward I-V characteristic curve

Package Diagram

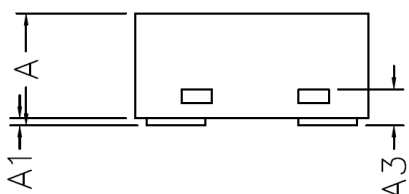
(Units: millimeters)



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSIONS(MM)			
PKG.	X1: EXTREME THIN		
REF.	MIN.	NOM.	MAX
A	>0.4	—	0.50
A1	0.00	—	0.05
A3	0.125REF.		
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
L	0.45	0.50	0.55
	—	—	—
	—	—	—
e	0.65 BSC		

Part Number Naming Conventions:

(e.g.) **Y** **VC** **032** **P** **034** **R** - **C4**

① ② ③ ④ ⑤ ⑥ ⑦

- ① Company: INNOTION
- ② Product ID: (VC=Variable Capacitance Diode)
- ③ Capacitance (C_T)@ $V_R=0V$ is expressed by three-digit alphanumeric (e.g. **032**=3.2pF, **228**=22.8pF)
- ④ Capacitance Unit: pF
- ⑤ Capacitance ratio: C_{0V} / C_{5V} is expressed by three-digit alphanumeric (e.g. **034** is $C_{0V} / C_{5V} = 3.4$)
- ⑥ Ratio
- ⑦ Internal part number