Hyperabrupt Junction Varactor Diode

KV2151

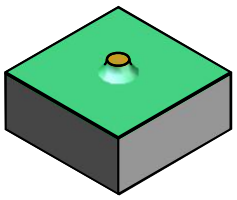
Product Overview

The KV2151 is a microwave hyperabrupt varactor, which offers octave tuning through 15 GHz. Its high-reliability passivated construction ensures excellent VCO settling time and post–tuning drift characteristics. Like their UHF counterparts, these diodes can achieve straight–line tuning over a mid–voltage bias range. Chip style is recommended for best wide bandwidth and highest frequency performance in microwave applications.

Key Features

- Available as packaged devices or as chips for hybrid applications
- Octave Tuning Range
- Ultra high Q
- Available with 5% C_j tolerance

Package Style



Ratings

- Min Voltage Breakdown: 22V @ 10 µA
- Max Leakage Current: 50 nA at 18V, 25 °C
- Operating Temperature: -55 °C + 125 °C
- Storage Temperature: -65 °C + 200 °C

Applications

- HV–VHF VCXO & TCXO Applications
- Frequency Modulators

Electrical Performance

Parameter	Conditions	Temp	Min	Typ	Max	Units
V_B	I_r = 10 µA	25 °C	22			V
I_r	V_r = 20V	25 °C			10	nA
V_f	I_f = 25 mA	25 °C			1.1	V
Ratio	C_{j0}/C_{j10}, f = 1 MHz	25 °C	5.8			
Ratio	C_{j0}/C_{j20}, f = 1 MHz	25 °C	11.5			
Q	V_r = 4V, f = 50 MHz	25 °C	800			
C_j	V_r = 0V, f = 1 MHz	25 °C	12.6		14	pF
C_j	V_r = 4V, f = 1 MHz	25 °C	4.2		5.0	pF
C_j	V_r = 15V, f = 1 MHz	25 °C	1.2		1.7	pF

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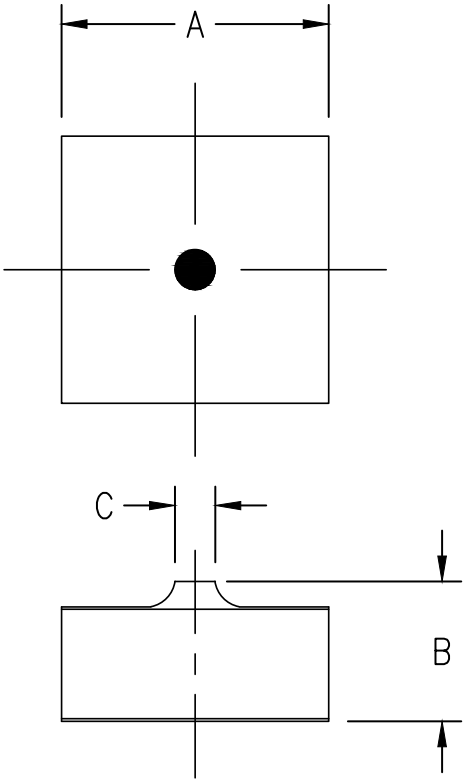
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1. Outline Drawing

Figure 1-1. Package Style – 00



DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.010	0.050	0.254	1.270
B	–	0.005 TYP	–	0.127 TYP
C	SEE NOTES		-	-

NOTES

1. TOP CONTACT, CHIP SIZE AND CHIP THICKNESS DEPENDS ON DIODE PARAMETERS. CONSULT FACTORY.
2. TOP AND BOTTOM CONTACTS GOLD.

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