

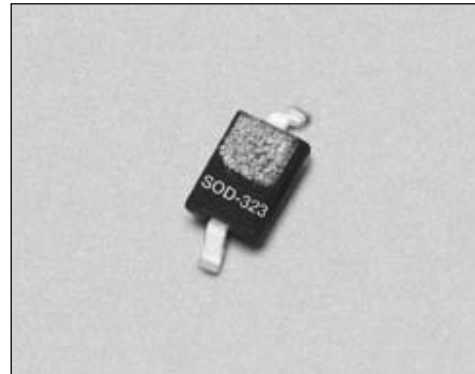
Hyperabrupt Junction Tuning Varactor



SMV1265-011

Features

- High Tuning Ratio
- Low Series Resistance
- SOD-323 Package
- Designed for High Volume, Low Cost Applications
- Available in Tape and Reel Packaging



Description

The SMV1265-011 is a surface mount varactor diode in the SOD-323 package. It is designed for very high capacitance tuning ratio while having low series resistance, which makes this device especially attractive for wide band VCO applications.

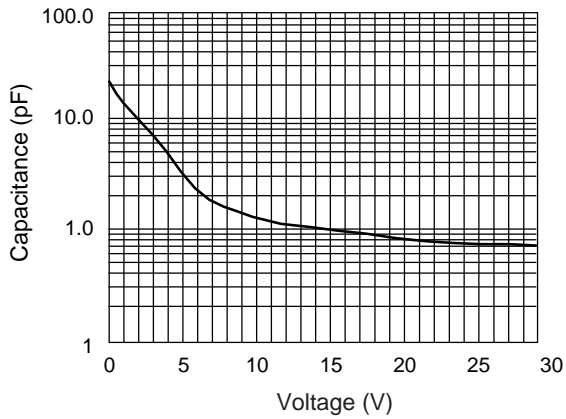
Absolute Maximum Ratings

Characteristic	Value
Forward Current (I_F)	20 mA
Power Dissipation (P_D)	250 mW
Storage Temperature (T_{ST})	-55°C to +150°C
Operating Temperature (T_{OP})	-55°C to +125°C

Electrical Specifications at 25°C

Parameter	Condition	Min.	Typ.	Max.	Unit
Reverse Current (I_R)	$V_R = 26\text{ V}$			20.00	nA
Capacitance (C_T)	$C_T @ 1\text{ V}, V_R = 1\text{ V}, F = 1\text{ MHz}$	12.50	13.8	14.70	pF
Capacitance (C_T)	$C_T @ 26\text{ V}, V_R = 26\text{ V}, F = 1\text{ MHz}$	0.58	0.7	0.83	pF
Capacitance Ratio (C_{TR})	$C_T(1\text{ V})/C_T(26\text{ V})$	17.70	19.5		
Series Resistance (R_S)	$V_R = 1\text{ V}, F = 470\text{ MHz}$		2.4		Ω
Breakdown Voltage (V_{BR})	$I_R = 10\ \mu\text{A}$	28.00			V

Typical Performance Data

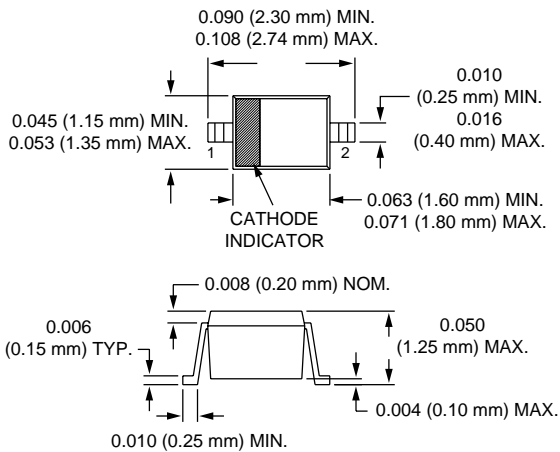


Capacitance vs. Voltage

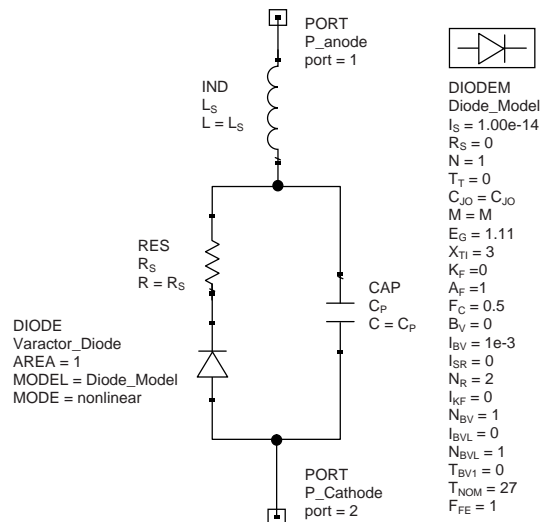
Capacitance vs. Voltage

V _R (V)	C _T (pF)
0.0	22.47
0.5	17.41
1.0	14.26
2.0	10.23
3.0	7.40
4.0	5.15
5.0	3.38
6.0	2.37
7.0	1.86
8.0	1.61
9.0	1.45
10.0	1.30
12.0	1.12
14.0	1.05
16.0	0.97
18.0	0.91
20.0	0.83
22.0	0.78
24.0	0.75
26.0	0.73
28.0	0.73
30.0	0.71

SOD-323



SPICE Model



Part Number	C _{JO} (pF)	V _J (V)	M	C _p (pF)	R _s (Ω)	L _s (nH)
SMV1265-011	22.5	30	13	0.71	2.4	1.7