

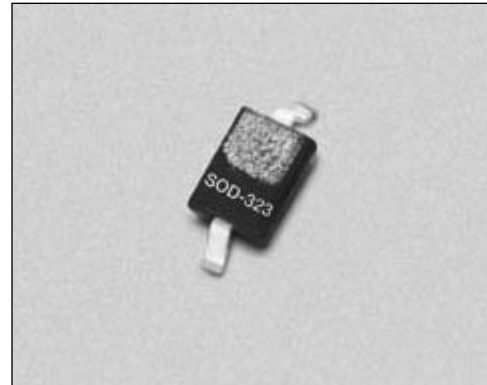
# Hyperabrupt Junction Tuning Varactor



SMV1245-011

## 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 SMV1245-011 is a surface mount varactor diode in the SOD-323 plastic package. It is designed for very low series resistance applications such as RF and microwave VCOs.

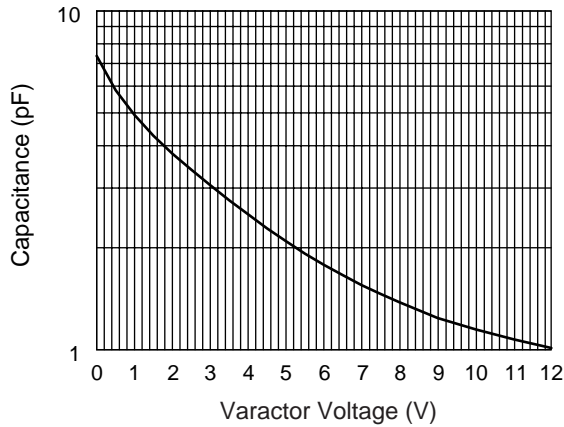
## Absolute Maximum Ratings

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	Frequency	Min.	Typ.	Max.	Unit
Breakdown Voltage ( $V_{BR}$ )	$I_R = 10 \mu A$		26.00			V
Reverse Current ( $I_R$ )	$V_R = 10 V$				50.00	nA
Capacitance ( $C_T$ )	$C_T @ 1 V, V_R = 1 V, F = 1 MHz$		4.40		5.40	pF
Capacitance Ratio ( $C_{TR}$ )	$C_T (1 V)/C_T (3 V)$		1.47		1.76	
Capacitance Ratio ( $C_{TR}$ )	$C_T (1 V)/C_T (9 V)$		3.50		4.20	
Series Resistance ( $R_S$ )	$V_R = 1 V, F = 500 MHz$				2.00	$\Omega$

Typical Performance Data



Capacitance vs. Voltage

Capacitance vs. Voltage

V <sub>R</sub> (V)	C <sub>T</sub> (pF)
0.0	7.37
0.5	5.84
1.0	4.93
1.5	4.28
2.0	3.79
2.5	3.40
3.0	3.06
3.5	2.76
4.0	2.51
4.5	2.28
5.0	2.09
5.5	1.92
6.0	1.78
6.5	1.66
7.0	1.55
7.5	1.46
8.0	1.38
8.5	1.32
9.0	1.26
9.5	1.20
10.0	1.16
10.5	1.12
11.0	1.08
11.5	1.05
12.0	1.02

SOD-323

