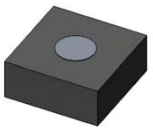
SMV14xx Series

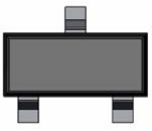
Silicon Abrupt Tuning Varactor Diodes

Rev. V1

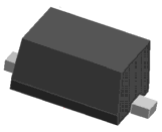
Features

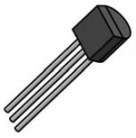
- High Capacitance Ratios
- Linear Tuning Between 2 and 8 Volts
- Available over a Broad Range of Junction Capacitance
- Satisfies a Large Number of Broadband Applications thru the VHF Frequency Band
- RoHS* Compliant


Chip


SOT-23


SOD-323


SOD-523


TO-92

Description

The SMV14xx Series tuning varactors are silicon abrupt junction devices. They are designed for RF and Microwave applications in VCO's, tunable filters, and matching networks. Available in a wide range of capacitance ratio values.

Electrical Specifications: T_C = +25°C

Part Number	Reverse Voltage	Total Capacitance[1]				Capacitance Ratio		Quality Factor
	V_B	C_T		C_T		C_R		Q
	I_R = 10 µA	V_R = 1 V, 1 MHz		V_R = 2 V, 1 MHz		C_T1 V / C_T10 V	C_T2 V / C_T10 V	V_R = 2 V, 1 MHz
	Min.	Min.	Max.	Min.	Max.	Min.		Min.
SMV1401	12	440	660	—	—	14:1	—	200
SMV1402	12	—	—	45	69	—	10:1	200
SMV1403	12	—	—	140	210	—	10:1	200
SMV1404	12	—	—	96	144	—	10:1	200
SMV1405	12	—	—	200	300	—	10:1	200
SMV1406	12	—	—	80	120	—	10:1	200
SMV1407	12	—	—	54	82	—	10:1	200
SMV1408	12	—	—	37	57	—	10:1	200
SMV1409	12	—	—	26	40	—	10:1	200
SMV1410	12	—	—	17	27	—	9.5:1	200
SMV1411	12	—	—	12	18	—	8.5:1	200
SMV1412	12	—	—	8	12	—	7.5:1	200

1. C_T value given in chip form and will vary depending upon the desired packaging type.

Absolute Maximum Ratings

Parameter	Absolute Maximum
Power Dissipation	250 mW
Operating Temperature	-55°C to +125°C
Storage Temperature	-65°C to +200°C

ESD & Moisture Sensitivity Level Rating

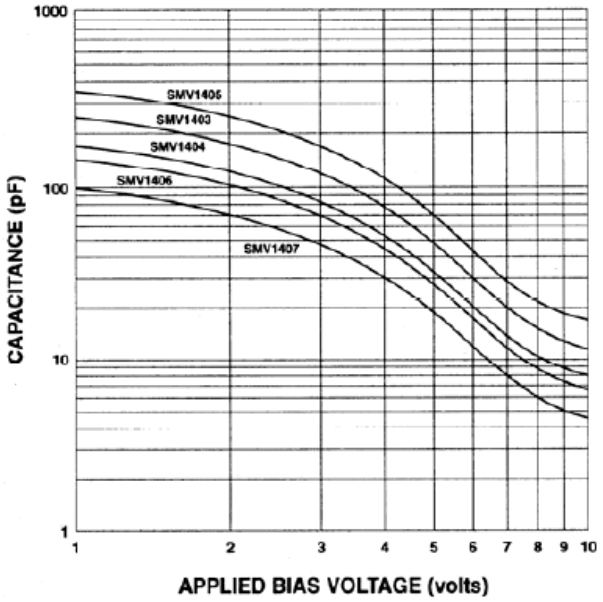
As are all semiconductors, silicon hyperabrupt tuning varactor diode are susceptible to damage from ESD events. Proper ESD prevention procedures should be followed. The ESD rating for these devices is Class 0 (HBM).

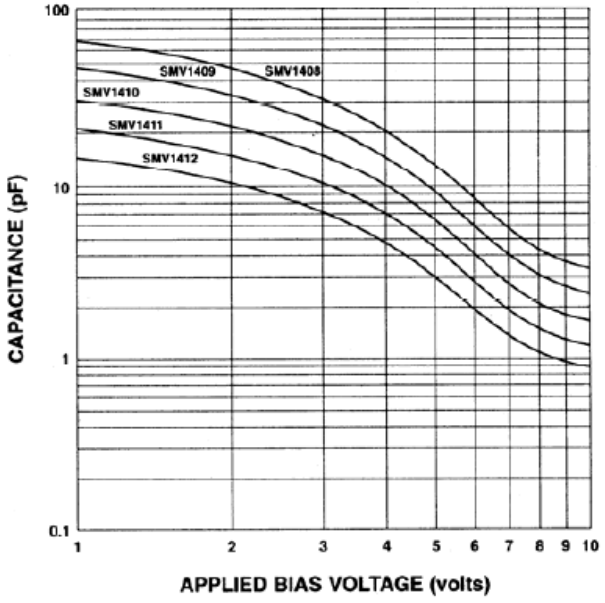
* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

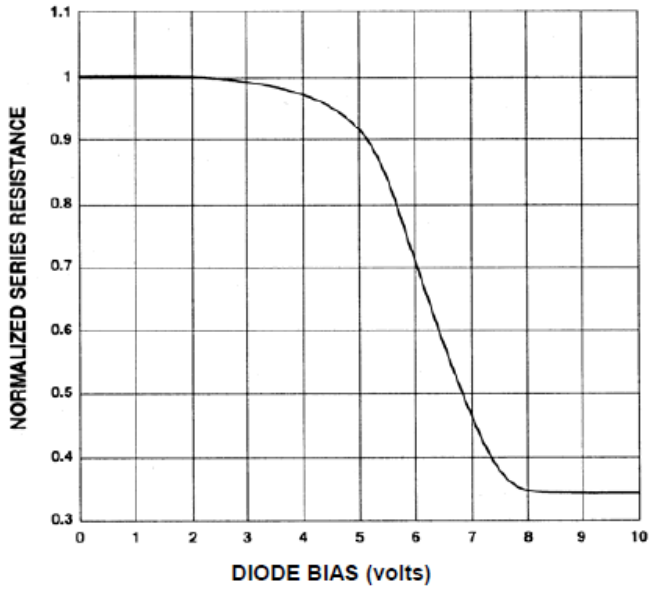
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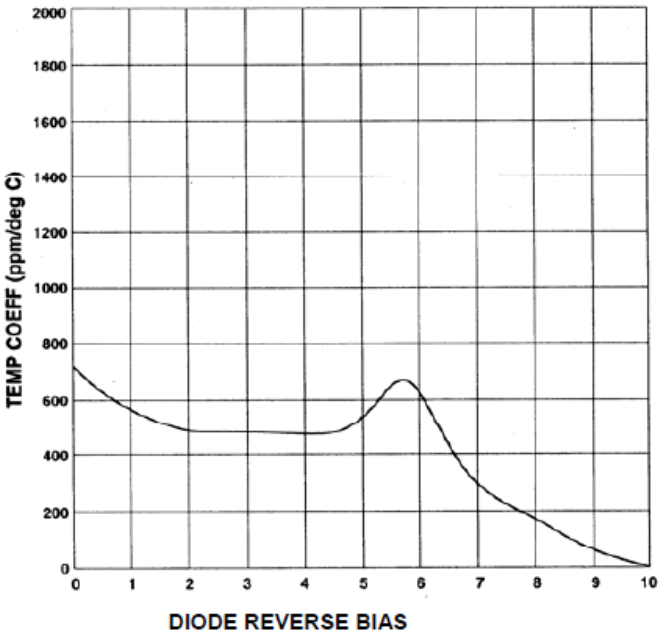
For further information and support please visit:
https://www.macom.com/support

Typical Performance Curves









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