

KNOX SEMICONDUCTOR, INC.

SMV2042 SERIES HYPERABRUPT TUNING DIODES VHF AND UHF FREQUENCIES

- Lower Phase Noise
- Superior Performance in Highly Stable Oscillator Designs
- Uniform Capacitance / Temperature Coefficient
- Highly Reproducible Ion Implanted Structure
- SOT-23 and SOD-323 Surface Mount Package
- Available in Common Cathode Configuration (Pin 3)
- Available in Chip Form

TYPE NUMBER	C _T @ 2.5 VOLT (pF)		TUNING RATIO (TR) C _T @ 1V / C _T @ 2.5V (pF)		TUNING RATIO (TR) C _T @ 2.5V / C _T @ 4V		Q @ 4VOLTS 50 MHz
	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	SMV20422◆	18	27	1.8	2.5	1.8	2.5
SMV20423◆	9	13	1.8	2.5	1.8	2.5	200
SMV20424◆	6	8	1.8	2.5	1.8	2.5	300
SMV20425◆	4.2	5.6	1.8	2.5	1.8	2.5	350

TYPE NUMBER	C _T @ 1 VOLT (pF)		C _T @ 2.5V (pF)		C _T @ 4V (pF)		Q @ 4 VOLTS 50 MHz
	MIN	TYP	MIN	MAX	TYP	MAX	MIN
SMV20412◆	42	54	18	27	8.7	12	150
SMV20413◆	17	22	8.5	10.5	4.0	5.5	200
SMV20415◆	8.7	11.3	4.3	5.5	2.2	2.9	200

Package Style	SOT-23
Reverse Breakdown Voltage (V _{BR})	12 Volt Min
Max Reverse Leakage Current (I _R)	10 μA _{dc}
Device Dissipation (P _D)	V _R = 8 Volts
Junction Temperature (T _J)	T _a = 25°C
Operating Temperature (T _{opr})	250 mW
Storage Temperature (T _{stg})	125°C
	-55° to +125°C
	-65° to +150°C

◆ Available in SOD-323 surface mount package. Part number changes to SMD.
To specify a Chip – delete prefix SMV or SMD and add suffix – CO (ie. 20422-CO)