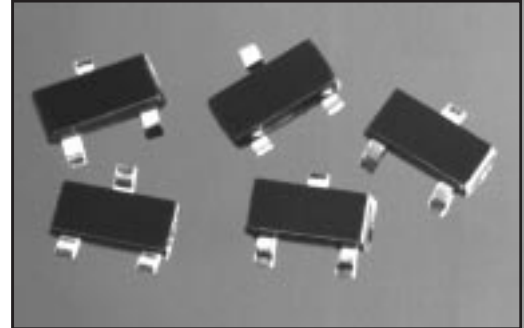


## SOT-23 LOW VOLTAGE SUPER HYPERABRUPT VARACTORS

- Silicon Mesa Geometry
- High Reliability Dense SiO<sub>2</sub> Passivation
- Widest Tuning Ratios
- Highest Q Available
- Excellent Mid-Range Linearity
- Mil Spec Performance/Economy Price



### DESCRIPTION

Designed for the demands of today's commercial surface mount products, these devices offer the high quality and reliability of our military microwave devices in a cost effective SOT-23 plastic package. Capacitance values are available for VCO's from VHF thru 1.5GHz. High C<sub>T</sub> ratios provide excellent bandwidth and straight line mid-range sensitivities in a low voltage varactor. Our proprietary grown junction epitaxy provides the highest Q values in the industry. These devices are the ideal choice for wireless fixed, mobile, or portable applications.

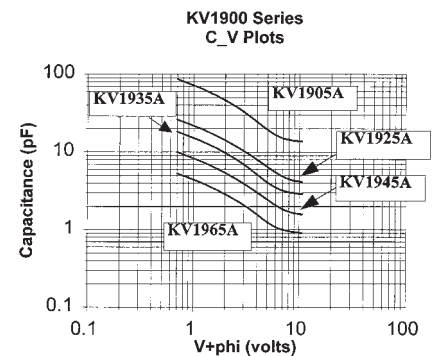
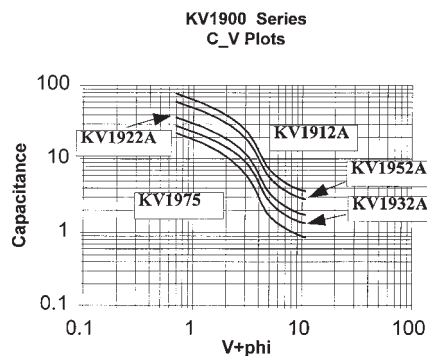
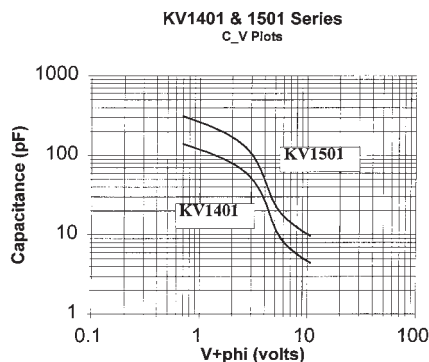
Devices are available in package style 23-0 (single die) or 23-4 (common cathode, 2 die). Some limitations apply. Consult factory for availability.

### APPLICATIONS

- Low Voltage Wireless Open Loop VCO's
- Low Voltage Wireless PLL VCO's
- TCXO's
- VCXO's
- $\phi$  SHIFTERS
- VVF's

### ABSOLUTE MAXIMUM RATINGS AT 25°C

Peak Inverse Voltage (PIV):	Same as V <sub>B</sub>
Forward Current (I <sub>F</sub> ):	1 AMP (1 $\mu$ S Pulse)
Power Dissipation (P <sub>D</sub> ):	250 mW, derate linearly to 0 at T <sub>J</sub> (max)
Junction Temp. (Operating):	-55°C to +125°C
Storage Temp. (Non-Operating):	-55°C to +125°C



# Surface Mount Devices

## SOT-23 SUPER HYPERABRUPT VARACTORS FOR 12 V HIGH SENSITIVITY VCO's & VCXO's

UHF - WIRELESS SUPER HYPERABRUPTS (4 V)				
P/N	C <sub>T1</sub> (pF)	C <sub>T2.5</sub> (pF)	C <sub>T4</sub> (pF)	Q (MIN/4V/50 MHz)
KV1975	>9.0	4.5 - 6.5	<3.0	400
UHF - WIRELESS SUPER HYPERABRUPTS (6 V)				
P/N	C <sub>T1</sub> (pF)	C <sub>T1</sub> /C <sub>T3</sub>	C <sub>T1</sub> /C <sub>T6</sub>	Q (MIN/4V/50 MHz)
KV1965A	3.0 - 3.6	1.4 - 1.9	2.6 - 3.3	1500
KV1945A	5.85 - 7.15	1.6 - 2.0	2.8 - 3.4	1200
KV1935A	10.35 - 12.65	1.6 - 2.0	2.9 - 3.4	1000
KV1925A	15.5 - 18.5	1.6 - 2.0	3.0 - 3.5	900
KV1905A	45 - 54	1.6 - 2.0	3.0 - 3.5	750
UHF - WIRELESS SUPER HYPERABRUPTS (8 V)				
P/N	C <sub>T1</sub> (pF)	C <sub>T2.5</sub> (pF)	C <sub>T8</sub> (pF)	Q (MIN/4V/50 MHz)
KV1932A	>13	6.5 - 10	<2.7	750
KV1932	>13	6.5 - 10	<2.7	350
KV1922A	>17	8.5 - 13	<3.2	600
KV1922	>17	8.5 - 13	<3.2	300
KV1952A	>26	13 - 20	<4.7	500
KV1952	>26	13 - 20	<4.7	225
KV1912A	>36	18 - 27	<6.2	400
KV1912	>36	18 - 27	<6.2	150
VHF / UHF - WIRELESS SUPER HYPERABRUPTS (10 V)				
P/N	C <sub>T2</sub> (pF)	C <sub>T7</sub> (pF Typ)	C <sub>T10</sub> (pF)	Q (MIN/2V/10 MHz)
KV1401	46 - 68	6.1	4.2 - 5.2	75
KV1501	100 - 150	13.0	8.6 - 10.6	50

RATINGS: V<sub>B</sub> @ 10 μA > 12 V I<sub>R</sub> @ 10 V < 50 nA @ 25°C

See Page 147 for Available Package Configurations.

### SEMICONDUCTOR OPERATION

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