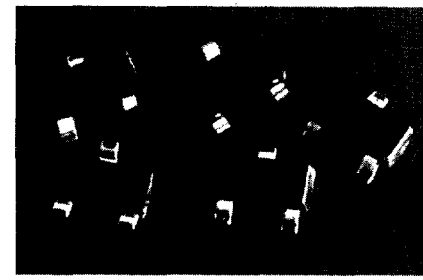
SOT-23 WIDE BANDWIDTH HYPERABRUPT VARACTORS

- **Silicon Mesa Geometry**
- **High Reliability Dense Si_2O Passivation**
- **Widest Tuning Ratios**
- **Highest Q Available**
- **Excellent Wide Band Linearity**
- **Mil Spec Performance/Economy Price**



DESCRIPTION

This family of high ratio hyperabrupt varactor diodes offers the designer outstanding wide frequency performance with the highest Q values available in the industry. The economical SOT-23 package allows these devices to be used in a wide range of VHF-UHF and wireless microwave designs. All are available in single die 23-0 configuration (see configuration sheet). Other configurations are available - consult factory for availability.

APPLICATIONS

- High Linearity VCO's
- Octave Bandwidth VCO's
- Low ϕ Noise VCO's
- PLL VCO's
- VVF's
- ϕ Shifters

ABSOLUTE MAXIMUM RATINGS AT 25°C

Peak Inverse Voltage (PIV):	Same as V_B
Forward Current (I_F):	1 AMP (1μS Pulse)
Power Dissipation (P_D):	250 mW, derate linearly to 0 at T_j (max)
Junction Temp. (Operating):	-55°C to +125°C
Storage Temp. (Non-Operating):	-55°C to +125°C

SOT-23 HYPERABRUPT VARACTORS

MICROWAVE HYPERABRUPTS (20 V)				
P/N	C_{T0} (pF MIN)	C_{T4} (pF)	C_{T20} (pF)	Q (MIN/4V/50 MHz)
KV2122	2.7	1.25 - 1.75	.43 - .57	1000
KV2132	4.2	1.7 - 2.5	.52 - .72	850
KV2142	6.3	2.2 - 3.8	.68 - .96	700
KV2152	11.9	3.7 - 5.5	.94 - 1.3	600
KV2162	26	9.0 - 11.0	1.9 - 2.5	400
VHF / UHF HYPERABRUPTS (25 V)				
P/N	C_{T3} (pF)	C_{T25} (pF)	Q (MIN/4V/50 MHz)	
KV31S1	9.5 - 14.5	1.8 - 2.8	200	
KV3201A	9.5 - 14.5	1.8 - 2.8	750	
KV38S2	26 - 32	4.3 - 6.0	200	
KV3901A	26 - 32	4.3 - 6.0	500	
VHF / UHF HYPERABRUPTS (20 V)				
P/N	C_{T4} (pF)	C_{T8} (pF)	C_{T20} (pF)	Q (MIN/4V/50 MHz)
KV2001	18 - 22	7.5 - 10.5	3.1 - 3.9	160
KV2201	45 - 55	18 - 25	7.3 - 9.2	125
KV2301	100 - 120	39 - 55	15 - 19	80

RATINGS: V_B @ 10 μA as shown; IR @ 20 V<50 nA @ 25°C

See Page 147 for Available Package Configurations.