

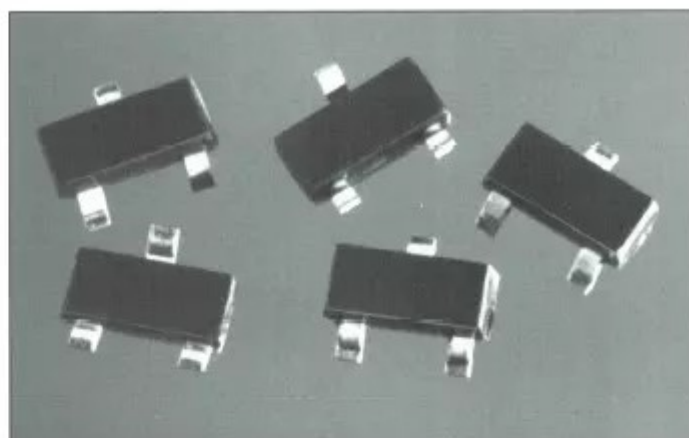
SOT-23 SURFACE MOUNT WIDE BANDWIDTH HYPERABRUPT VARACTORS

FEATURES

- Silicon Mesa Geometry
- High Reliability Dense SiO₂ Passivation
- Widest Tuning Ratios
- Highest Q Available
- Excellent Wide Band Linearity
- Mil Spec Performance/Economy Price

APPLICATIONS

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



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.

LORAL SOT-23 HYPERABRUPT VARACTORS

MICROWAVE HYPERABRUPTS (20V)				
P/N	C _{T0} (pF MIN)	C _{T4} (pF)	C _{T20} (pF)	Q (MIN/4V/50MHz)
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	450
VHF / UHF HYPERABRUPTS (25V)				
P/N	C _{T3} (pF)	C _{T25} (pF)	Q (MIN/4V/50MHz)	
KV3151	9.5 - 14.5	1.8 - 2.8	200	
KV3201A	9.5 - 14.5	1.8 - 2.8	750	
KV3852	26 - 32	4.3 - 6.0	200	
KV3901A	26 - 32	4.3 - 6.0	500	
VHF / UHF HYPERABRUPTS (20V)				
P/N	C _{T4} (pF)	C _{T8} (pF)	C _{T20} (pF)	Q (MIN/4V/50MHz)
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

See Page 14 for Available Package Configurations.

LORAL

Microwave - FSI

SEMICONDUCTOR DIVISION • 75 TECHNOLOGY DRIVE • LOWELL, MA 01851 • TEL: 508-256-4113 x3314

SURFACE MOUNT PACKAGE CONFIGURATIONS - FOR SOT AND EPISM TYPE PACKAGES

<p>Single Right</p> <p>SOT 23-0 154-0</p>	<p>Single Left</p> <p>SOT 23-1 154-1</p>	<p>Series 'Tee' Left</p> <p>SOT 23-2 154-2</p>	<p>Common Anode</p> <p>SOT 23-3 154-3</p>																																				
<p>Common Cathode</p> <p>SOT 23-4 154-4</p>	<p>Series 'Tee' Right</p> <p>SOT 23-5 154-5</p>	<p>Single Reverse Left</p> <p>SOT 23-6 154-6</p>	<p>Single Reverse Right</p> <p>SOT 23-7 154-7</p>																																				
<p>Dual Anode</p> <p>SOT 23-8 154-8</p>	<p>Dual Cathode</p> <p>SOT 23-9 154-9</p>	<p>Double Parallel Pair</p> <p>SOT 23-10 154-10</p>	<p>Double Common Cathode</p> <p>SOT 23-11 154-11</p>																																				
<p>Parallel Pair</p> <p>SOT 23-12 154-12</p>	<p>Unconnected Pair</p> <p>SOT 143-5</p>	<p>Ring Quad</p> <p>SOT 143-6</p>	<p>Crossover Quad</p> <p>SOT 143-7</p>																																				
<p>SOT 23</p>	<table border="1"> <thead> <tr> <th>Dim</th> <th>Min</th> <th>Typ</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>15</td> <td>17</td> <td>21</td> </tr> <tr> <td>B</td> <td>35</td> <td>37.5</td> <td>40</td> </tr> <tr> <td>C</td> <td>70</td> <td>75</td> <td>80</td> </tr> <tr> <td>D</td> <td>45</td> <td>50</td> <td>55</td> </tr> <tr> <td>E</td> <td>--</td> <td>100</td> <td>--</td> </tr> <tr> <td>F</td> <td>18</td> <td>23</td> <td>27</td> </tr> <tr> <td>G</td> <td>--</td> <td>75</td> <td>80</td> </tr> <tr> <td>H</td> <td>31</td> <td>33</td> <td>36</td> </tr> </tbody> </table> <p>Dimensions In Mils.</p>	Dim	Min	Typ	Max	A	15	17	21	B	35	37.5	40	C	70	75	80	D	45	50	55	E	--	100	--	F	18	23	27	G	--	75	80	H	31	33	36	<p>SOT 143</p>	<p>154 (EPISM)</p>
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Note: Some limitations apply - Consult factory for details