



MICROWAVE PRODUCTS DIVISION

KV1913A thru GC1310

ENHANCED PERFORMANCE  
SURFACE MOUNT "EPSM" PACKAGED DEVICES

PRODUCT PREVIEW

#### DESCRIPTION

Our EPSM packaged devices are designed for the most demanding commercial and Military requirements where the inconsistency of performance inherent in plastic surface mount packages cannot be tolerated. These package styles extend the surface mount construction format to 6 GHz for high performance wireless applications including VCO's, limiters, pin switches and pin attenuators. Select varactors from three families of C/V curves for designs through 6 GHz. They are available in multiple chip configuration as well as outlines which directly replace SOT-23 and SOD-323 devices. Other devices and values are always available - contact our applications engineering department for more details.

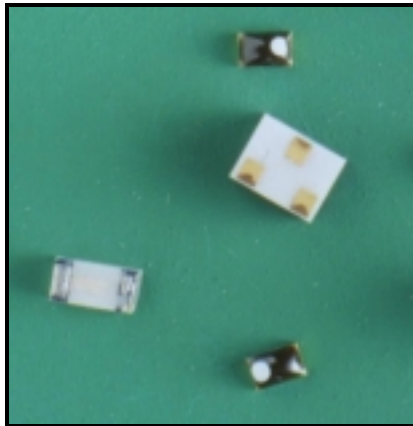
**IMPORTANT:** For the most current data, consult *MICROSEMI's* website: <http://www.microsemi.com>

#### KEY FEATURES

- Frequencies from VHF to 6 GHz
- Lower Parasitics
- Mil Grade Ceramic/Epoxy Amalgam Construction
- Dense SiO<sub>2</sub> Junction Passivation
- Superior Consistency/Repeatability
- Footprints Available for SOT-23/SOD-323/SOD-123
- Priced for Commercial Products
- Tape & Reel for Volume Pick & Place

#### APPLICATIONS/BENEFITS

- High performance wireless surface mounting including:
  - GSM
  - TAGS
  - WANS
  - PCS
  - AMPS
  - DECT
  - CELLULAR



**ENHANCED PERFORMANCE  
SURFACE MOUNT "EPSM" VARACTORS**

**KV1900A SUPER HYPERABRUPT VARACTORS FOR 1 - 8 VOLT HIGH SENSITIVITY VCO'S**

MODEL	C <sub>T1</sub>	C <sub>T2.5</sub>	C <sub>T4</sub>	C <sub>T8</sub>	Q (4V / 50Mhz)
KV1913A	> 36 pF	18 - 27 pF	< 12.0 pF	< 6.20 pF	400
KV1953A	> 26 pF	13 - 20 pF	< 9.0 pF	< 4.70 pF	500
KV1923A	> 17 pF	8.5 - 13 pF	< 6.0 pF	< 3.20 pF	600
KV1933A	> 13 pF	6.5 - 10 pF	< 4.5 pF	< 2.70 pF	750
KV1943A	> 9 pF	4.5 - 6.5 pF	< 3.0 pF	< 1.70 pF	900
KV1963A	> 4 pF	2.0 - 3.0 pF	< 1.5 pF	< 1.00 pF	1200
KV1973A	> 1.8 pF	1.1 - 1.5 pF	< 0.8 pF	< 0.55 pF	1400
KV1983A	> 1.2 pF	0.8 - 1.1 pF	< 0.6 pF	< 0.45 pF	1600
KV1993A	> 0.6 pF	0.5 - 0.8 pF	< 0.4 pF	< 0.35 pF	1800

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

**KV2100 MICROWAVE HYPERABRUPT VARACTORS FOR 2 - 15 VOLT WIDE BANDWIDTH VCO'S**

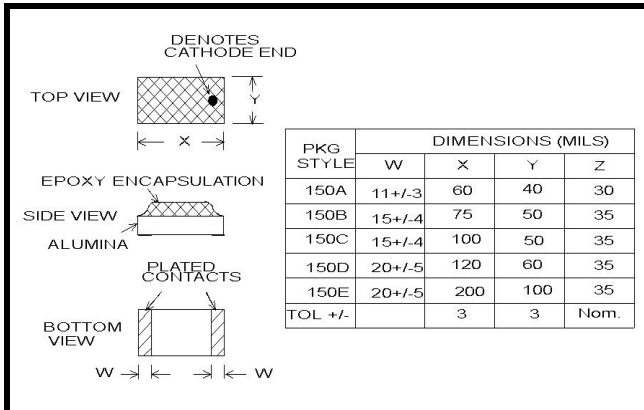
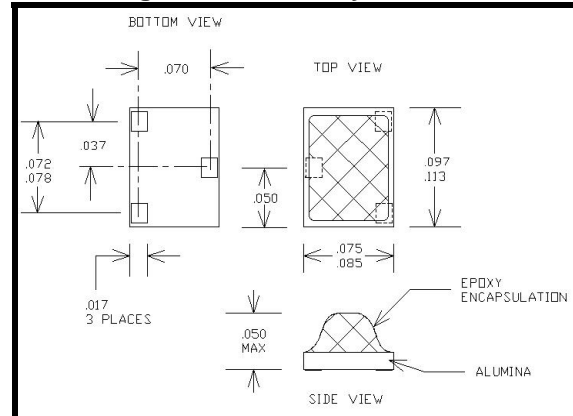
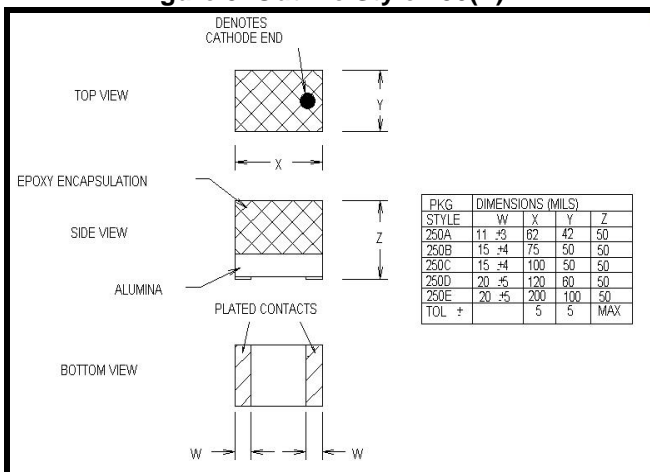
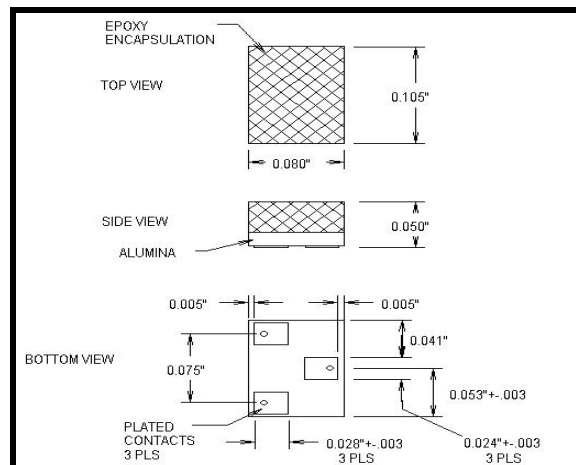
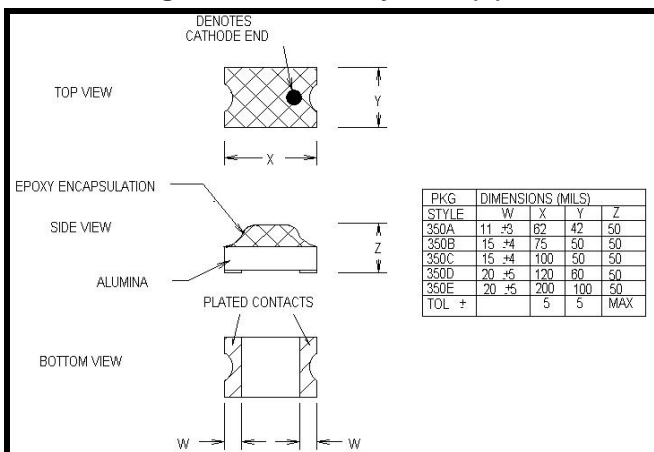
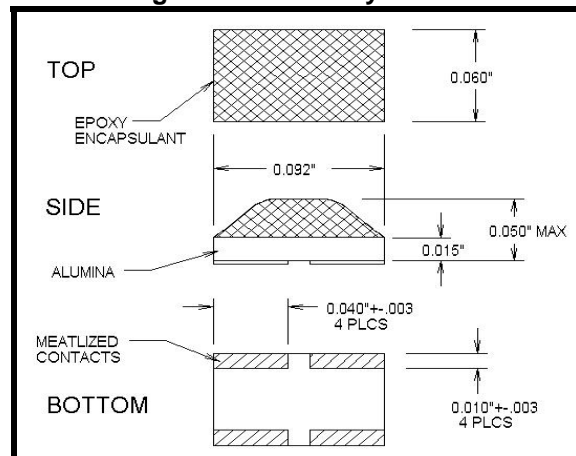
MODEL	C <sub>T0</sub> MAX	C <sub>T4</sub>	C <sub>T20</sub> MAX	Q (4V / 50Mhz)
KV2163	26 pF	8.75 - 10.80 pF	2.50 pF	> 400
KV2153	13.5 pF	4.45 - 5.50 pF	1.30 pF	> 600
KV2143	7 pF	2.65 - 3.30 pF	0.90 pF	> 700
KV2133	5 pF	1.75 - 2.20 pF	0.70 pF	> 850
KV2123	3 pF	1.30 - 1.65 pF	0.55 pF	> 1000
KV2113	2 pF	0.85 - 1.10 pF	0.45 pF	> 1200

RATINGS: V<sub>B</sub> @ 10μA > 22V I<sub>R</sub> @ 20V < 50 nA @ 25°C

**GC1300 MICROWAVE ABRUPT VARACTORS  
FOR 0-30 VOLT MODERATE BANDWIDTH LOW NOISE VCO'S**

MODEL	C <sub>T0</sub> /C <sub>T4</sub>	C <sub>T4</sub> ± 10%	C <sub>T4</sub> / C <sub>T30</sub>	Q (4V / 50Mhz)
GC1300	> 1.5	0.8 pF	> 1.45	> 3900
GC1301	> 1.6	1.0 pF	> 1.55	> 3800
GC1302	> 1.7	1.2 pF	> 1.60	> 3700
GC1303	> 1.8	1.5 pF	> 1.65	> 3600
GC1304	> 1.9	1.8 pF	> 1.70	> 3500
GC1305	> 2.0	2.2 pF	> 1.75	> 3400
GC1306	> 2.0	2.7 pF	> 1.80	> 3300
GC1307	> 2.1	3.3 pF	> 1.85	> 3100
GC1308	> 2.1	3.9 pF	> 1.85	> 2700
GC1309	> 2.1	4.7 pF	> 1.85	> 2600
GC1310	> 2.1	5.6 pF	> 1.85	> 2500

RATINGS: V<sub>B</sub> @ 10μA > 30V I<sub>R</sub> @ 25V < 50 nA @ 25°C

**EPSM AVAILABLE CONFIGURATIONS**
**Figure 1 Outline Style 150(X)**

**Figure 2 Outline Style 154**

**Figure 3 Outline Style 250(X)**

**Figure 4 Outline Style 254**

**Figure 5 Outline Style 350(X)**

**Figure 6 Outline Style 252A**




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NOTES