**GENERAL DESCRIPTION**

AVX 0201 Multi-Layer Varistors are designed for circuits where board space is a premium. 0201 MLV offer bi-directional ESD protection in the smallest package available today. The added advantage is EMI/RFI attenuation. 0201 MLV can replace 2 diodes and the EMC capacitor for a one chip solution.

The miniature size and one chip solution team to offer designers the best in ESD protection and EMI filtering in one ultra compact device.

**APPLICATIONS**

- Cell phone
- PDA
- Camera modules
- Embedded components
- Hearing aid
- Any circuit with space constraints

**FEATURES**

- Capacitance 15pF to 150pF
- Low VB Version
- Bi-Directional protection
- Fastest response time to ESD strikes
- Multi-strike capability
- Ultra compact 0201 case size

**HOW TO ORDER**

<table>
<thead>
<tr>
<th>Varistor Chip</th>
<th>0201 Chip Size</th>
<th>Working Voltage (03 = 3.5V)</th>
<th>Energy Rating V = 0.02J</th>
<th>Capacitance 151 = 150pF</th>
<th>Packaging W = 7&quot;</th>
<th>Termination P = Ni Barrier/100% Sn (matte)</th>
<th>RoHS COMPLIANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC020103V101WP</td>
<td>3.5</td>
<td>2.0</td>
<td>4.76 min 8.84 max</td>
<td>14max</td>
<td>1</td>
<td>50</td>
<td>100pF ±30%</td>
</tr>
<tr>
<td>VC020103V121WP</td>
<td>3.5</td>
<td>2.0</td>
<td>4.76 min 8.84 max</td>
<td>14max</td>
<td>1</td>
<td>50</td>
<td>125pF ±30%</td>
</tr>
<tr>
<td>VC020103V151WP</td>
<td>3.5</td>
<td>2.0</td>
<td>4.76 min 8.84 max</td>
<td>14max</td>
<td>1</td>
<td>50</td>
<td>150pF ±30%</td>
</tr>
<tr>
<td>VC020105T150WP</td>
<td>5.6</td>
<td>4.0</td>
<td>10.0 min 15.6 max</td>
<td>35max</td>
<td>1</td>
<td>50</td>
<td>15pF ±30%</td>
</tr>
<tr>
<td>VC020105T330WP</td>
<td>5.6</td>
<td>4.0</td>
<td>10.0 min 15.6 max</td>
<td>35max</td>
<td>1</td>
<td>50</td>
<td>33pF ±30%</td>
</tr>
<tr>
<td>VC020105T500WP</td>
<td>5.6</td>
<td>4.0</td>
<td>10.0 min 15.6 max</td>
<td>35max</td>
<td>1</td>
<td>50</td>
<td>50pF ±30%</td>
</tr>
<tr>
<td>VC020105T101WP</td>
<td>5.6</td>
<td>4.0</td>
<td>10.0 min 15.6 max</td>
<td>35max</td>
<td>1</td>
<td>50</td>
<td>50pF ±30%</td>
</tr>
<tr>
<td>VC020105V101WP</td>
<td>5.6</td>
<td>4.0</td>
<td>6.4 min 9.6 max</td>
<td>17max</td>
<td>1</td>
<td>50</td>
<td>100pF ±30%</td>
</tr>
<tr>
<td>VC020107V101WP</td>
<td>7.0</td>
<td>5.6</td>
<td>9.6 min 14.4 max</td>
<td>20max</td>
<td>1</td>
<td>50</td>
<td>100pF ±30%</td>
</tr>
<tr>
<td>VC020116T150WP</td>
<td>16</td>
<td>11</td>
<td>21.7 min 29.3 max</td>
<td>45max</td>
<td>1</td>
<td>50</td>
<td>15pF ±30%</td>
</tr>
</tbody>
</table>

**GENERAL CHARACTERISTICS**

Operating Temperature: -55°C to +125°C
- Working Voltage: 3.5Vdc - 16Vdc
- Case Size: 0201
**Miniature 0201 MLV**

**AVX Multilayer Ceramic Transient Voltage Suppressors**

**ESD Protection for any Circuit with Board Space Constraints**

**PHYSICAL DIMENSIONS:** mm (inches)

<table>
<thead>
<tr>
<th>Size (EIA)</th>
<th>Lenght (L)</th>
<th>Width (W)</th>
<th>Max Thickness (T)</th>
<th>Terminal (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0201</td>
<td>0.60±0.03</td>
<td>0.30±0.03</td>
<td>0.33 max.</td>
<td>0.15±0.05</td>
</tr>
<tr>
<td></td>
<td>(0.024±.001)</td>
<td>(0.011±0.001)</td>
<td>(0.013 max.)</td>
<td>(0.006±0.002)</td>
</tr>
</tbody>
</table>

**VOLTAGE/CURRENT CHARACTERISTICS**

![Graph showing voltage/current characteristics](image)

**TYPOICAL 8 KV ESD PERFORMANCE**

(150pF / 300ohm IEC Network)

![Graph showing typical 8 KV ESD performance](image)

**TRANSMISSION CHARACTERISTICS**

5.6Vdc

![Graph showing transmission characteristics for 5.6Vdc](image)

3.5Vdc

![Graph showing transmission characteristics for 3.5Vdc](image)

8kV CONTACT ESD vs PULSE 1 Mohm Input

(150pF / 330ohm Network)

![Graph showing 8kV contact ESD vs pulse](image)

16Vdc

![Graph showing transmission characteristics for 16Vdc](image)