Filters, Connectors & Shielding

Presented by:
FilConn
May 30, 2013
TVS DIE CONTACT LAYOUT

RAW CONTACT UNASSEMBLED

DIE CONTACT ASS’Y WITHOUT ENCAPSULANT
DIE CONTACT ASS’Y
WITH ENCAPSULANT

GROUND PLANE
FULL ASSEMBLY CALL OUTS WITH DIE CONTACT IN HERMETIC CONNECTOR
PI-FILTER WITH ATTACHED GROUND SPRING

L-FILTER WITHOUT GROUND SPRING
PLANAR CAPACITOR AND MOV PLANAR ARRAY

CONNECTOR WITH TAPPED PCB MOUNTING HOLES
Multilayer Varistor Planar Arrays

The MOV (Metal Oxide Varistor) Planar Array is an application specific component designed for use in multi-line EMI filter circuits typically found in filtered connectors.

MOV Planar Arrays, when used in isolation or together with Syfer’s Capacitor Planar Arrays, can provide a complete over-voltage transient protection and EMI filtering solution to connector manufacturers.

With the MOV Planar Arrays inherent capacitance, it can be used as a simple C filter or as one half of a Pi or unbalanced Pi filter.

Planar array technology affords the user weight and volumetric efficiency compared to other transient protection or capacitor devices.

Mechanical specification

<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8999 x 04</td>
</tr>
<tr>
<td>404 x 600</td>
</tr>
<tr>
<td>D SUB (rectangular and trapezoidal)</td>
</tr>
<tr>
<td>High Density “D” SUB</td>
</tr>
<tr>
<td>Micro-D (ML-C-38513)</td>
</tr>
</tbody>
</table>

Special custom shapes are available upon request. Component thicknesses are produced from a minimum of 0.055” to a maximum of 0.125”.

The crystal structure of a Varistor has no directionality, and therefore Varistors are bi-polar devices. With symmetrical, steep voltage breakdown characteristics, they exhibit an electrical behavior similar to a back-to-back Zener diode.

Maximum continuous dc Working Voltage: This is the maximum continuous dc working voltage which may be applied to the maximum operating temperature of the Varistor.

Nominal voltage: This is the voltage across the Varistor when it dissipates a 1W surge at 25°C. To the point that it is the maximum continuous operating voltage of a Varistor:

Maximum Clamping Voltage: As a Varistor is designed for handling Transient Voltages, all tests require current in excess of 1 A as a pulsed test.

The Clamping Voltage of a Varistor is the peak voltage appearing across the device when measured under the conditions of a specified pulse current and a specified waveform.
Integrated banding platform for EMI applications
IBP ADVANTAGES

1. one piece design provides direct termination to the shell of the connector providing the best possible grounding. DC resistance .5 milliohms or less

2. No backshell means no coupling nut issues as in coming loose or cross threading. No alignment issues

3. the one piece design makes installation and rework much easier with no backshell in the way
IBP ADVANTAGES

1. 60% lower overall profile than the traditionally connector and backshell configuration.

2. 40% weight savings over the traditional configuration.

3. one part number reduces inventory and part count.
EMI and STRAIN RELIEF
Low profile 90 eliminates chafing
90 DEGREE SOLUTION
QUESTIONS OR COMMENTS