High Performance RFI Filters for Switching Power Supplies

N Series

• Superior attenuation for most digital electronic equipment over the frequency range of 10kHz to 30MHz
• Provides excellent common mode and differential mode performance
• Cost-effective solution to very noisy equipment that must meet conducted emission limits

Specifications

Maximum leakage current each Line to Ground:
@ 120 VAC 60 Hz: 1.2 mA
@250 VAC 50 Hz: 2.0 mA

Hipot rating (one minute):
Line to Ground: 2250 VDC
Line to Line: 1450 VDC

Rated Voltage (max): 250 VAC
Operating Frequency: 50/60 Hz
Rated Current: 6 to 10A

Operating Ambient Temperature Range
(at rated current \(I_r\): -10°C to +40°C

In an ambient temperature \((T_a)\) higher than +40°C the maximum operating current \((I_o)\) is calculated as follows:

\[ I_o = I_r \sqrt{85 - T_a}/45 \]

Ordering Information

10 VN 1

Input / Output Style
1 - .250 [6.3] spade terminals

N Series

Leakage current designation
V - Standard

Current Rating
6 or 10A

Available Part Numbers

6VN1 10VN1

Electrical Schematics

3VN

10VN
## N Series

### Case Styles

![Case Styles Diagram]

Typical Dimensions:
- Line/Load Terminals (4): 250 (6.3) with .07 (1.8) Dia. hole
- Ground Terminal (1): 250 (6.3) with .07 x .16 (1.8 x 3.8) slot
- Mounting Holes (2): .188 (4.78) Dia.

### Case Dimensions

<table>
<thead>
<tr>
<th>Part No.</th>
<th>A (max)</th>
<th>B (max)</th>
<th>C (max)</th>
<th>D ± .015</th>
<th>E (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6VN1</td>
<td>3.56</td>
<td>2.15</td>
<td>1.81</td>
<td>2.938</td>
<td>3.38</td>
</tr>
<tr>
<td></td>
<td>90.4</td>
<td>54.6</td>
<td>45.9</td>
<td>74.63</td>
<td>85.8</td>
</tr>
<tr>
<td>10VN1</td>
<td>4.69</td>
<td>2.27</td>
<td>1.8</td>
<td>4.063</td>
<td>4.47</td>
</tr>
<tr>
<td></td>
<td>119.1</td>
<td>57.7</td>
<td>45.7</td>
<td>103.2</td>
<td>113.5</td>
</tr>
</tbody>
</table>

### Performance Data

#### Typical Insertion Loss

Measured in closed 50 Ohm system

![Insertion Loss Graphs]

- Common Mode / Asymmetrical (L-G)
- Differential Mode / Symmetrical (L-L)

#### Minimum Insertion Loss

Measured in closed 50 Ohm system

<table>
<thead>
<tr>
<th>Common Mode / Asymmetrical (Line to Ground)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
</tr>
<tr>
<td>Rating</td>
</tr>
<tr>
<td>6A</td>
</tr>
<tr>
<td>10A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differential Mode / Symmetrical (Line to Line)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
</tr>
<tr>
<td>Rating</td>
</tr>
<tr>
<td>6A</td>
</tr>
<tr>
<td>10A</td>
</tr>
</tbody>
</table>