MDI model 3723 hermetic power line EMI filters compliment MDI 3700 Series DC-DC converters without internal filters to meet the latest MIL-STD-461C CE03, CS01 and MIL-STD-461D-G CE102, CS101 test method requirements.

In applications where low reflected noise currents are needed to meet MIL-STD-461, power line filtering provides attenuation to reduce common mode (line to ground) and differential mode (line to line) currents. MDI’s model 3723 provides such filtration in both modes to provide compliance whether measured in dBuA or dBuV test modes. The resulting low insertion loss design achieves the necessary attenuation for CE03 or CE102 compliance while minimizing the possibility of excessive input filter impedance mismatch that might otherwise result in DC-DC converter loop instability.

The filters are rated as completely compatible with all normal, abnormal, emergency, over/under voltage and transient conditions listed in MIL-STD-704 A-F. A single filter can serve several DC-DC converters up to the rated maximums and two or more 3723 filters may be used in parallel to serve multiple DC-DC converters sharing the same input bus.

Several grade and screening levels are available to suit any reliability requirement.

**Features/Benefits**

- Compliant with MIL-STD-461C, CE03 and CS01.
- Common and differential mode filtering for low reflected input power line ripple currents.
- Operates over all normal, abnormal, transient and OV conditions listed in relevant MIL-STD-704 systems applications.
- Compact 1.08 x 1.08 x .275 inch (LWH) package; rugged full hermetic construction.
- Compliments MDI Model 3700 Series DC-DC converters.

**Specifications**

**Environment:**
- Temperature range, storage non-operating (Tcase): -60°C to +150°C
- Shock: MIL-STD-810, Method 516.5 Procedure III (50Gs 11mS pulse, all axis)
- Random Vibration: MIL-STD-883, Method 2026, Test Condition 2H (32.3G, all axis)
- Grade: E -55°C to +125°C, derates Pout to zero at 135°C
- Grades: M, I -55°C to +85°C, derate Pout to zero at 115°C
- Weight: 25 grams typical

**Models 3723 Power Line EMI Filters Specifications**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Nominal Input Voltage (VDC)</th>
<th>Input Voltage Range (VDC)</th>
<th>Absolute Maximum Input Voltage (VDC)</th>
<th>Input Transient Rating (V)</th>
<th>Compatible With</th>
<th>Rated Current (A)</th>
<th>Maximum Power Dissipation at Rated Current (W)</th>
<th>Typical Attenuation (dB at 200kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3723</td>
<td>28</td>
<td>0 – 50</td>
<td>100</td>
<td>80</td>
<td>MIL-STD-704A-F</td>
<td>7</td>
<td>1.4</td>
<td>-63</td>
</tr>
</tbody>
</table>

**Pin Out Chart**

- Pin 1: LINE In +
- Pin 2: LINE In +
- Pin 3: LINE In +
- Pin 4: Chassis
- Pin 5: LINE In +
- Pin 6: LINE In Rtn
- Pin 7: LINE In Rtn
- Pin 8: LINE In Rtn
- Pin 9: LINE In Rtn
- Pin 10: LOAD Out Rtn
- Pin 11: LOAD Out Rtn
- Pin 12: LOAD Out Rtn
- Pin 13: LOAD Out Rtn
- Pin 14: Not Connected
- Pin 15: LOAD Out +
- Pin 16: LOAD Out +
- Pin 17: LOAD Out +
- Pin 18: LOAD Out +

**Model No.** 3723
- **Case Style:** 1
- **Pin Count:** 18
- **Mounting:** Solder Sealed, Flangeless PCB Mount

**Case Dimensions**

Units: inches / millimeters

<table>
<thead>
<tr>
<th>Case Style</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.080</td>
<td>27.432</td>
<td>1.080</td>
<td>27.432</td>
<td>0.275</td>
<td>6.985</td>
<td>0.800</td>
</tr>
</tbody>
</table>

**Tolerances:** Drawings in Inches. All dimensions ±0.01 except F = max, C = ±0.01/0.020. For Custom Packages, Contact MDI Engineering.