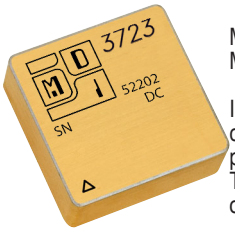
Model 3723 EMI Filter

For MIL-STD-461C CE03, CS01 Requirements



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.
- Compliant with MIL-STD-461D-G, CE102 and CS101
- 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)

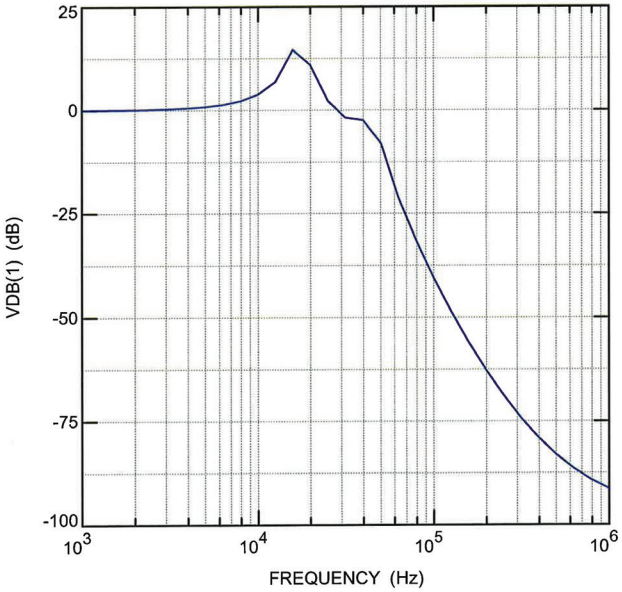
Acceleration: MIL-STD-883, Method 2001, Test Condition A1, Y1 direction, 500Gs

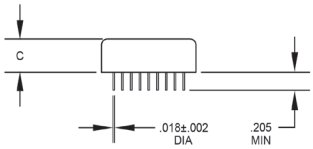
Grade: E -55°C to +125°C, derates Pout to zero at 135°C
Grades: M, I -55°C to +85°C, derate Pout to zero at 115°C

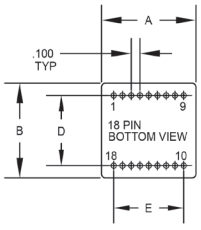
Weight: 25 grams typical

Models 3723 Power Line EMI Filters Specifications

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







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

Model No.	Case Style	Pin Count	Mountung
3723	25	18	Solder Sealed Flangeless PCB Mount

Case Dimensions
Units: inches | millimerters

Case Style	A	B	C	D	E	F	G
1	1.080 | 27.432	1.080 | 27.432	0.275 | 6.985	0.800 | 20.320	0.800 | 20.320	— | —	— | —

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

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Revised 2018-06-15