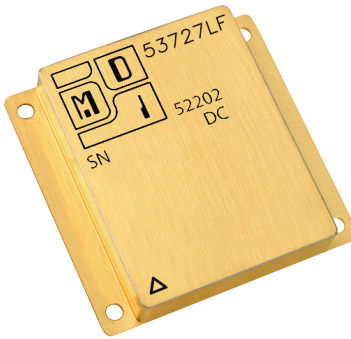


# Series \*3727 MOAF EMI Filter

## For MIL-STD-461D,E,F,G CE102 Requirements



MDI model \*3727 MOAF (Mother Of All Filters) series meets the latest MIL-STD-461D,E,F,G CE102 test method requirements when used with most unfiltered DC - DC converters

Now, MDI offers the model \*3727 MOAF series, a compact standalone, low attenuation low I<sup>2</sup>R loss solution that permits users to meet newer MIL-STD-461D,E,F,G CE102 limits with legacy converters having built-in 461C CE03 filters. They are particularly useful in power system applications where multiple DC-DC converters are paralleled in high load current and/or N+1 redundant applications.

The \*3727 MOAFs, sized to accommodate a broad range of popular satellite, ISS/Orion, airframe and vehicle input voltage buses, incorporate two common mode stages and three low attenuation, low resonance differential mode stages. The resulting design achieves the necessary attenuation for CE102 compliance while minimizing the possibility of excessive input filter impedance mismatch that might otherwise result in DC-DC converter loop instability. Further, the design avoids use of multi-turn wound inductors, greatly reducing internal I<sup>2</sup>R copper losses, improving efficiency and reducing power dissipation.

A single MOAF can serve multiple DC-DC converters up to the published rated maximum current.. Please see our application notes for insertion loss curves and full technical details.

### Features/Benefits

- Compact stand alone hermetically sealed solution.
- Low loss design for maximum efficiency and low power dissipation.
- Easily incorporated into new or existing system design layouts as "add-on" modules.
- Choice of PWB or chassis mount package styles, both rugged full hermetic hybrid construction.
- Several grade and screening levels available to suit any reliability requirement.
- Available in all popular bus voltages.

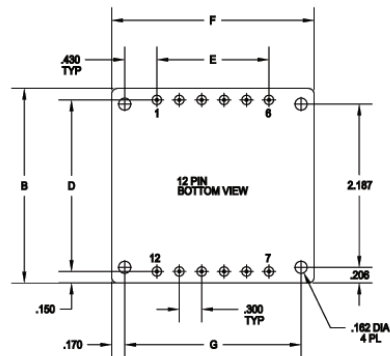
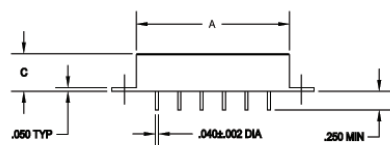
### \*3727 MOAF Product Family Selection Guide

Model Number	Application Bus	Input Nominal Volts DC	Input Range Volts DC	Rated Current Amperes	Rated Power Dissipation (Pd) Watts
3727	28V Military Aircraft or Vehicle (MIL-STD-704, 1275)	28	16 – 50	50	20
53727	28 VDC Satellite Bus	28	16 – 50	50	20
73727	50 VDC Satellite Bus	50	30 – 75	50	20
83727	70 VDC Satellite Bus	70	55 – 90	25	10
93727	100 VDC Satellite Bus	100	80 – 120	25	10
33727	120 V ISS Orion Bus	120	86 – 158	25	10
23727	270 V MIL-STD-704 Aircraft Bus	270	182 – 335	25	10

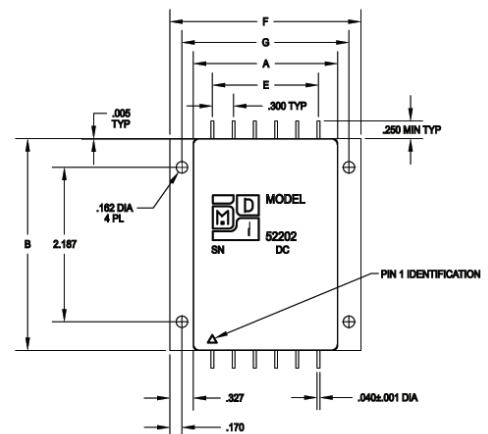
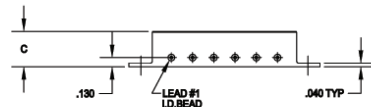
### Connections \*3727 MOAF

Pin No.	Designation
1	Input Positive
2	Input Positive
3	Input Positive
4	Input Return
5	Input Return
6	Input Return
7	Output Return
8	Output Return
9	Output Return
10	Output Positive
11	Output Positive
12	Output Positive

### CASE STYLE 7



### CASE STYLE 9



Units: inches | millimeters TOLERANCES: All dimensions ±0.01 except F = max, C = +0.01/-0.020. Drawings in Inches.

Case Style	A	B	C	D	E	F	G
7 LF	2.040   51.816	2.610   66.294	0.495   12.573	2.300   58.420	1.500   38.100	2.710   68.834	2.360   59.944
9 ZF	2.040   51.816	3.010   76.454	0.495   12.573	—   —	1.500   38.100	2.710   68.834	2.360   59.944



**Modular Devices, Inc.**  
Power Conversion for Space and Military/Aerospace

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Revised 2022-08-15