

# Interpoint® High Reliability DC-DC Converters



**MSA 5 W**



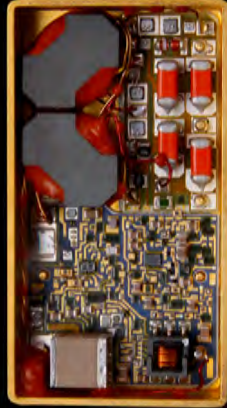
**MHF+ 15 W**



**MHV 15 W**



**MFK 25 W**



**MTR 30 W**



**MWR 35 W**



**MFX 50 W**



**MFL 60 W**



**MOR 120 W**

# Interpoint® High Reliability DC-DC Converters and EMI Filters

## DC-DC CONVERTERS <sup>1</sup>

| MODEL (SERIES)                 | INPUT VOLTAGE (VDC) | OUTPUT VOLTAGE (VDC)   | OUTPUT POWER (W) | EFFICIENCY (% , TYPICAL) | OPERATING TEMPERATURE | AVAILABLE SCREENING                                   | EMI FILTER <sup>2</sup> |
|--------------------------------|---------------------|--|------------------|--------------------------|-----------------------|---|-------------------------|
| MOR                            | 16 - 40             | 3.3, 5, 6.3, 9.5, 12, 15<br>±3.3, ±5, ±6.3<br>±9.5, ±12, ±15 | 66 - 120         | 77 - 87                  | -55° to +125°C        | Standard, ES, or 883, Class H-QML                     | FMCE-1528               |
| MFL                            | 16 - 40             | 3.3, 5, 12, 15, 28<br>±5, ±12, ±15                           | 50 - 65          | 76 - 86                  | -55° to +125°C        | Standard, ES, or 883, Class H-QML                     | FMCE-1528<br>FMCE-0828  |
| MFX                            | 16 - 50             | 3.3, 5, 9, 12, 15  | 50               | 89 91                    | -55° to +125°C        | Standard, ES or screened to 883                       | FMCE-0528               |
| MWR                            | 16 - 50             | +3.3 & ±12, +3.3 & ±15<br>+5 & ±12, +5 & ±15                 | 30 - 35          | 81 - 85                  | -55° to +125°C        | Standard, ES or screened to 883 Class H               | fmce-0528               |
| MTR 50                         | 16 - 50             | 3.3, 5, 8.5, 12, 15<br>±5, ±12, ±15                          | 20 - 30          | 76 - 84                  | -55° to +125°C        | Standard, ES, or 883, Class H-QML                     | FMCE-0828<br>FMCE-0528  |
| MFK                            | 16 - 50             | 1.8, 2.5, 3.3, 5, 5.7, 12, 15, 28<br>±5, ±7, ±12, ±15        | 10 - 25          | 72 - 86                  | -55° to +125°C        | Standard, ES, or 883, Class H-QML                     | FMCE-0528               |
| MHV                            | 16 - 50             | 3.3, 5, 12, 15<br>±5, ±12, ±15                               | 10 - 15          | 72 - 83                  | -55°C to +125°C       | Standard, ES, or 883, Class H-QML                     | FMCE-0528               |
|                                |                     | +5 & ±12, +5 & ±15   | 15               | 78                       |                       |   |                         |
| MHF+                           | 16 - 40             | 1.9, 3.3, 5, 5.2, 5.3, 12, 15, 28<br>±5, ±12, ±15            | 6.65 - 15        | 62 - 84                  | -55° to +125°C        | Standard, ES, or 883, Class H-QML                     | FMCE-0328               |
|                                | 16 - 48             | +5 & ±12<br>+5 & ±15   | 15               | 75                       |                       |   |                         |
| MFP POL Converter <sup>2</sup> | 3 - 6               | 0.8 - 3.5  | 5.6 - 16.5       | 73 - 92                  | -55° to +125°C        | Side-Leaded up to Class H-QML<br>Flanged, side-leaded | NA                      |
| MSA                            | 16 - 40             | 5, 5.2, 12, 15<br>±5, ±12, ±15                               | 1.2 - 5          | 71 - 80                  | -55° to +125°C        | Standard, ES, or 883, Class H-QML                     | FMSA                    |
| MCH <sup>2</sup>               | 12 - 50             | 5, 12, 15<br>±5, ±12, ±15                                    | 1.5              | 76 - 79                  | -55° to +125°C        | Standard, ES, or 883, Class H-QML                     | FMSA                    |

1. Product images on reverse are actual full size, however variations may occur due to printing.

2. Not shown on reverse.

## EMI FILTERS <sup>1, 2</sup>

| MODEL                     | DROP-IN REPLACEMENT FOR | INPUT VOLTAGE (VDC) | CURRENT (MAX. A) | MINIMUM ATTENUATION (DB) @ 500 kHz | AVAILABLE SCREENING               | COMPATIBLE CONVERTER                                       |
|---------------------------|-------------------------|---------------------|------------------|------------------------------------|-----------------------------------|--|
| FMCE-1528 <sup>3</sup>    | FME28-461               | -0.5 to 50          | 15               | 60                                 | Standard, ES, or 883, Class H-QML | MOR, MFL, MTR, MHV, MHF+, MSA, MGA, MCH, MGH               |
| FMCE-0828 <sup>3</sup>    | FMD28-461               | -.05 to 50          | 8                | 50                                 | Standard, ES, or 883, Class H-QML | MOR, MFL, MTR, MHV, MHF+, MSA, MGA, MCH, MGH,              |
| FMCE-0528 <sup>3, 4</sup> | FMC-461                 | -.05 to 50          | 5                | 55                                 | Standard, ES, or 883, Class H-QML | MOR, MFL, MF, MWR, MTR, MFK, MHV, MHF+, MSA, MGA, MCH, MGH |
| FMCE-0328 <sup>3</sup>    | FMH-461                 | -.05 to 50          | 3                | 50                                 | Standard, ES, or 883, Class H-QML | MHV, MHF+, MSA, MGA, MCH, MGH                              |

1. Not shown on reverse.

2. All filters may be used with multiple converters up to the rated current of the filter.

3. Meets MIL-STD-461C CE03 and CS01 and MIL-STD-461D, E and F CE102 and CS101 levels of conducted emissions.

4. Active transient suppression.