

ASF461 SERIES

ADVANCED ANALOG EMI FILTER

Description

The ASF461 EMI filter will reduce the input line reflected ripple current of the ASA line of DC/DC converters to levels below the CEO3 limits of MIL-STD-461.

These EMI filters are available with military screening and built in a facility fully qualified to MIL-PRF-38534. Four grades are offered with different screening options. Refer to Part Number section.

The ASF461 Filter is built using thick film hybrid technology and seam welded in a hermetic kovar package for high reliability.

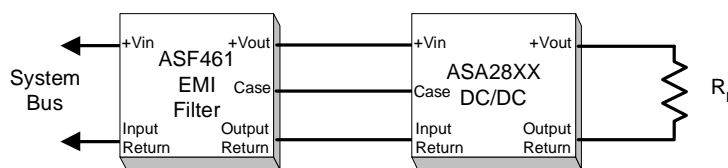
These units offer superior noise reduction and power dissipation when compared with similar competitive filters. No derating is required over the entire operating temperature range.



Features

- Uses less than 1.2 sq. in. of Board Space
- -55°C to +125°C Operation
- Greater than 50db Ripple Current Reduction
- Optimal Military Screening
- No Derating for -55°C to +125°C Operation

Typical Application



Specifications

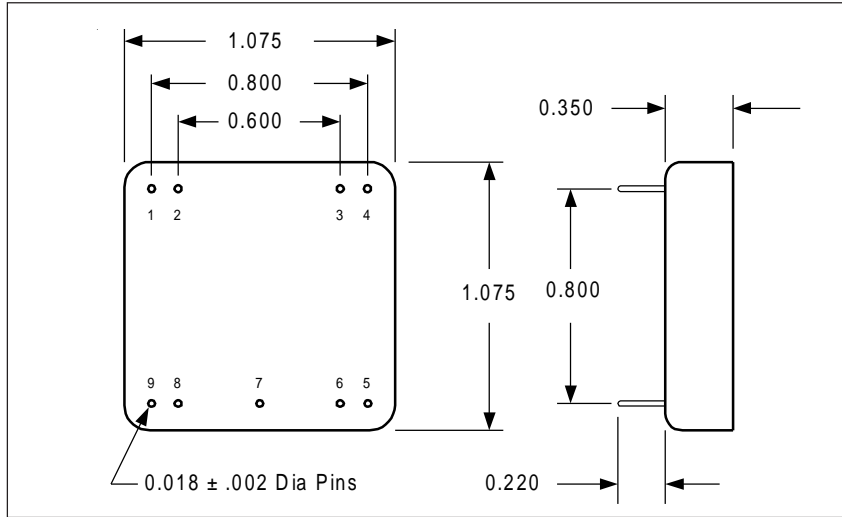
| Parameter | Condition | Min | Typ | Max | Unit |
|----------------------------|------------------------------|---|-----|------|-------|
| Input Voltage | Steady State | 0 | 28 | 50 | VDC |
| Input Current | Steady State | | | 420 | mADC |
| Output Voltage | Steady State | $V_{OUT} = V_{IN} (I_{IN} \times R_{DC})$ | | | VDC |
| Output Current | Steady State | | | 420 | mADC |
| DC Resistance (R_{DC}) | Steady State | 1.7 | 2.0 | 2.3 | ohms |
| Power Dissipation | Max. Current 420 mA | | | 1.6 | watts |
| Noise Rejection | 100 KHz 500 KHz to 10 MHz | -40 -60 | | | db |
| Capacitance | Any pin to case | | | 4200 | pf |
| Isolation | Any pin to case 500VDC | 100 | | | MΩ |
| Operating Temp | Base plate | -55 | +25 | +125 | °C |
| Storage Temp | Base plate | -65 | +25 | +150 | °C |
| Weight | | | | 39 | grams |

Available Screening Levels and Process Variations for ASF461 Series

| Requirement | MIL-STD-883 Method | No Suffix | ES Suffix | HB Suffix | CH Suffix |
|----------------------------|-----------------------------|----------------|-----------------|------------------|------------------|
| Temperature Range | | -20°C to +85°C | -55°C to +125°C | -55°C to +125°C | -55°C to +125°C |
| Element Evaluation | | | | | MIL-PRF-38534 |
| Internal Visual | 2017 | * | Yes | Yes | Yes |
| Temperature Cycle | 1010 | | Cond B | Cond C | Cond C |
| Constant Acceleration | 2001 | | 500g | Cond A | Cond A |
| Burn-in | 1015 | 48hrs @ 85°C | 48hrs @ 125°C | 160hrs @ 125°C | 160hrs @ 125°C |
| Final Electrical (Group A) | MIL-PRF-38534 Specification | 25°C | 25°C | -55, +25, +125°C | -55, +25, +125°C |
| Seal, Fine & Gross | 1014 | Cond C | Cond A, C | Cond A, C | Cond A, C |
| External Visual | 2009 | * | Yes | Yes | Yes |

* Per Commercial Standards

ASF461 Case Outline



Pin Designation

| Pin No. | Designation |
|---------|-----------------|
| 1 | Input Return * |
| 2 | Input Return * |
| 3 | Input * |
| 4 | Input * |
| 5 | Output * |
| 6 | Output * |
| 7 | Case |
| 8 | Output Return * |
| 9 | Output Return * |

* Make external connection to both Pins

Part Numbering

