



M.S.KENNEDY CORP.

3A EMI FILTER

EFJ2803

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(315) 701-6751

HI-REL DESIGN

- WELDED HERMETIC PACKAGE
- ALL CERAMIC CAPACITORS
- SURFACE MOUNT MAGNETICS

FEATURES

- REPLACES APEX FDHC461
- -55° TO +125°C OPERATION
- 40db MINIMUM DIFFERENTIAL MODE REJECTION AT 200KHz
- 60db MINIMUM DIFFERENTIAL MODE REJECTION FROM 500 KHz TO 50 MHz
- MEETS MIL-STD-461C CE03 STANDARDS FOR MSK DHC2800 SERIES DC-DC CONVERTERS
- MIL-STD-704A THROUGH E POWER BUS COMPATABILITY

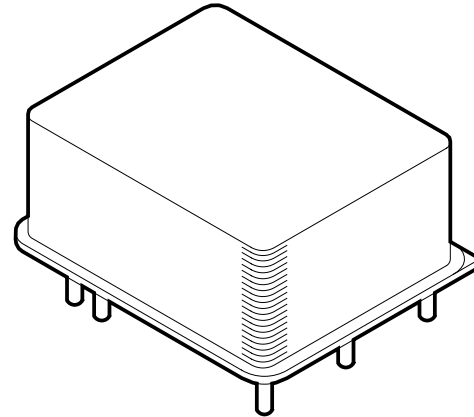
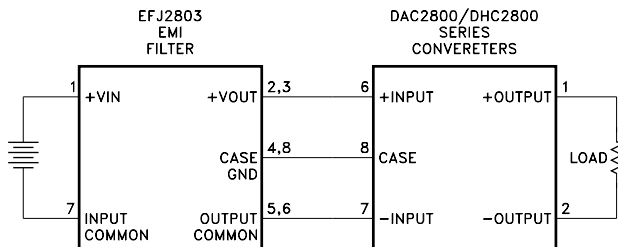
DESCRIPTION

The EFJ2803 is a high reliability EMI filter for use with the DAC2800/DHC2800 series of DC-DC converters. This filter has been designed to reduce the input line reflected ripple current to within the limit of MIL-STD-461C, CE03.

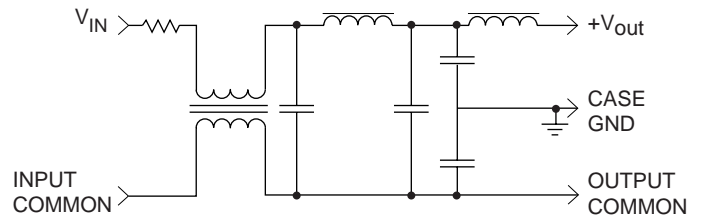
EFJ2803 hybrid EMI filters utilize all ceramic capacitors, surface mount magnetics and ultrasonically bonded aluminum wires to provide reliable operation at all operating temperatures while surviving very high G forces.

The 8-pin package is hermetically sealed and isolated from the internal circuits. Heat sinking is recommended for full power operation at elevated ambient temperatures. Multiple DC-DC converters may use the same filter, up to the rated throughput current of the filter.

TYPICAL APPLICATION



EQUIVALENT SCHEMATIC



EXTERNAL CONNECTIONS

- 1 +VIN
- 2 +VOUT
- 3 +VOUT
- 4 CASE GROUND
- 5 OUTPUT COMMON
- 6 OUTPUT COMMON
- 7 INPUT COMMON
- 8 CASE GROUND

EFJ2803

ABSOLUTE MAXIMUM RATINGS SPECIFICATIONS

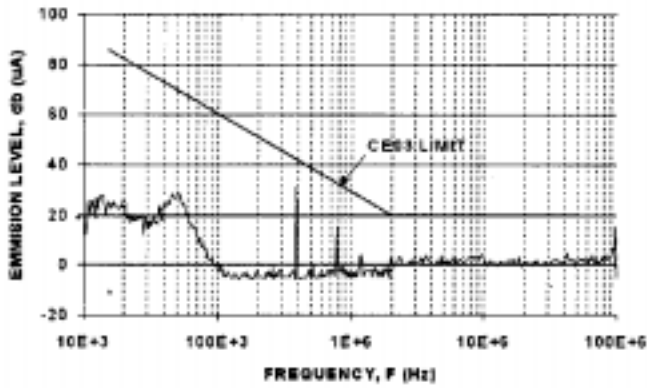
| | | |
|--------------------------|-----------------------------|----------------|
| ABSOLUTE MAXIMUM RATINGS | INPUT VOLTAGE RANGE | 0-50Vdc |
| | INPUT VOLTAGE TRANSIENT | 80V @ 50ms |
| | OUTPUT CURRENT ² | 3Adc |
| | TEMPERATURE RANGE, storage | -65 to 150°C. |
| | OPERATING TEMPERATURE, case | -55 to ±125°C. |

SPECIFICATIONS

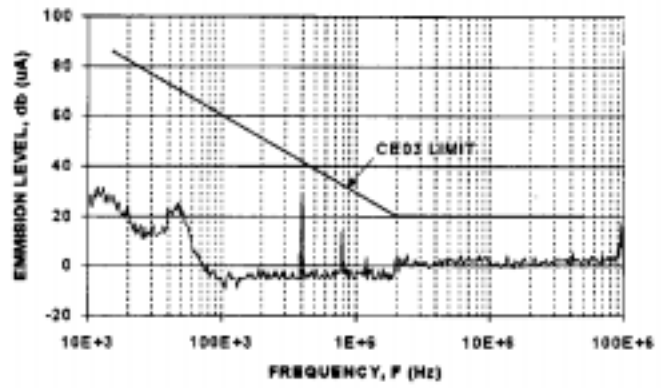
| PARAMETER | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|-----------------------------|-------------------------|-----|----------------------------------|------|-------|
| INPUT VOLTAGE | STEADY STATE | 0 | 28 | 40 | V |
| INPUT CURRENT | DC | | | 3 | A |
| OUTPUT VOLTAGE | STEADY STATE | | $V_{out} = V_{in} - I_{in}(RDC)$ | | Vdc |
| OUTPUT CURRENT | STEADY STATE | | | 3 | A |
| DC RESISTANCE (Rdc) | T = 125°C | | 0.5 @ 25°C | 0.85 | Ohms |
| DIFFERENTIAL MODE REJECTION | 200 Khz | 40 | | | db |
| DIFFERENTIAL MODE REJECTION | 500KHz-50MHz | 60 | | | db |
| COMMON MODE REJECTION | 2MHz-50MHz | 40 | | | db |
| CAPACITANCE | ANY PIN TO CASE | | | 4 | nF |
| ISOLATION | ANY PIN TO CASE, 500Vdc | 100 | | | MOhm |
| OPERATING TEMPERATURE RANGE | CASE BASEPLATE | -55 | | +125 | °C |
| STORAGE TEMPERATURE RANGE | CASE BASEPLATE | -65 | | +150 | °C |
| POWER DISSIPATION | 1Adc, T=125°C | | 0.65 | 0.85 | W |
| CASE TEMPERATURE RISE | CASE TO AIR | | 38 | | °C/W |

- NOTES: 1. Tcase= -55°C to 125°C unless otherwise specified.
2. Typical Dissipation at 3 amps is 6 watts.

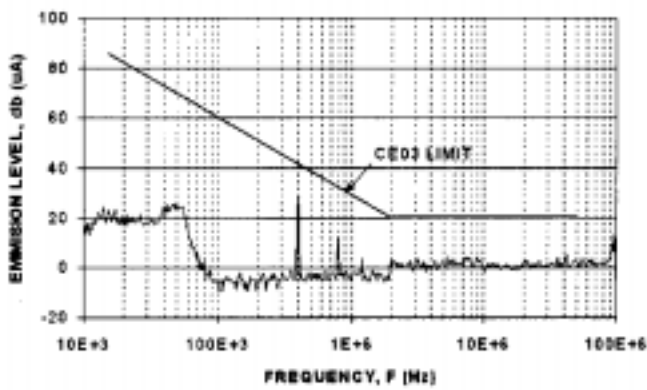
DHC2803S CONVERTER WITH EFJ2803 FILTER



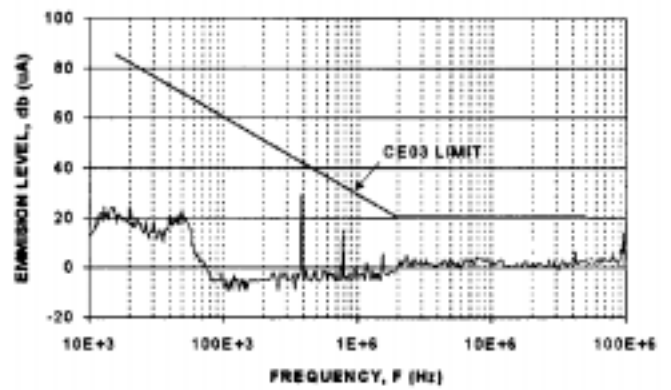
DHC2805S CONVERTER WITH EFJ2803 FILTER



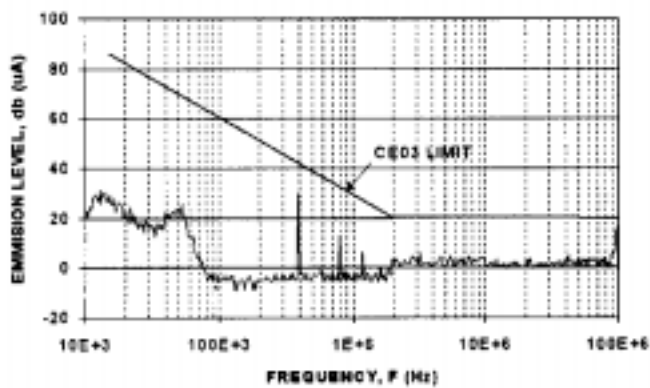
DAC2812S CONVERTER WITH EFJ2803 FILTER



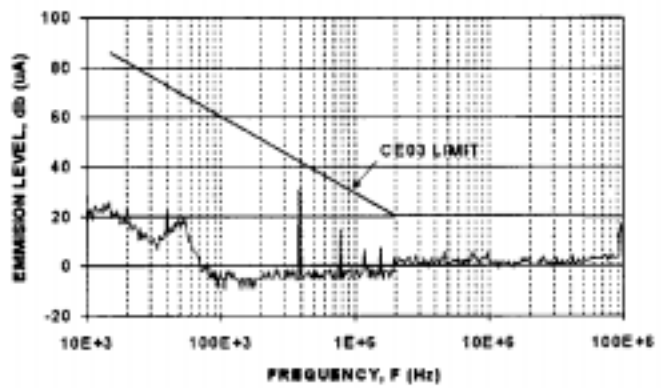
DAC2815SS CONVERTER WITH EFJ2803 FILTER



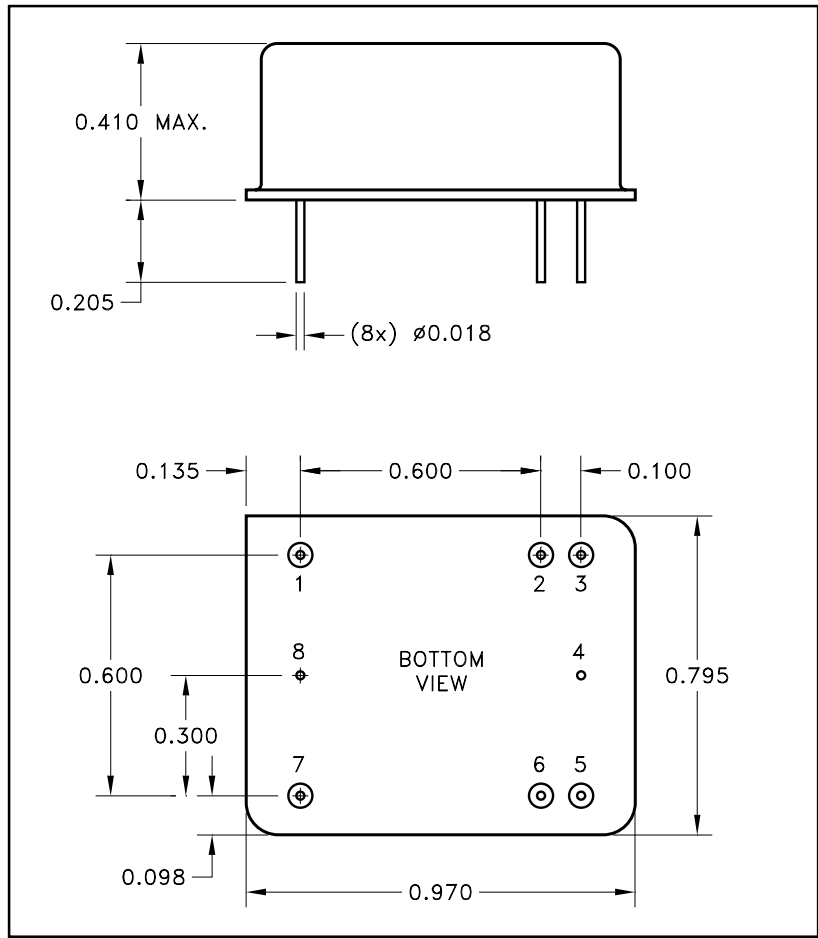
DAC2812D CONVERTER WITH EFJ2803 FILTER



DAC2815D CONVERTER WITH EFJ2803 FILTER



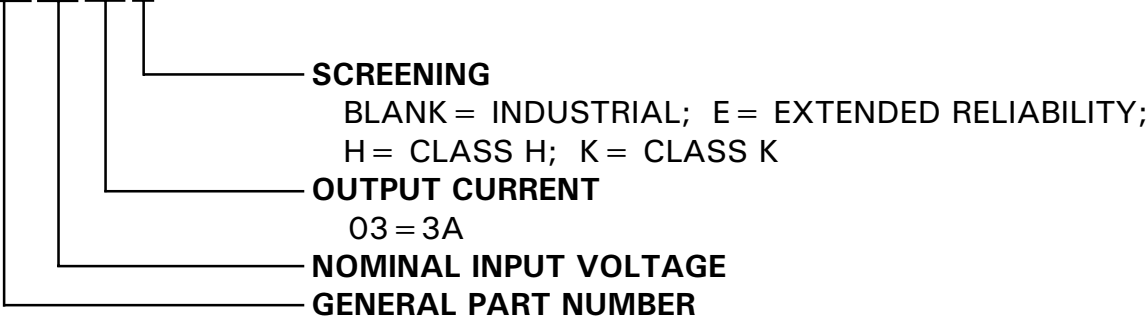
MECHANICAL SPECIFICATIONS



NOTE: ALL DIMENSIONS ARE ±0.010 INCHES UNLESS OTHERWISE LABELED.

ORDERING INFORMATION

EFJ2803



The above example is an industrial grade 3 Amp EMI Filter

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