



# 3A EMI FILTER

# EFJ2803

4707 Dey Road Liverpool, N.Y. 13088

(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

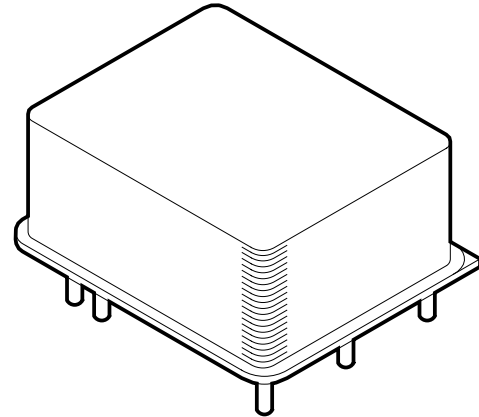
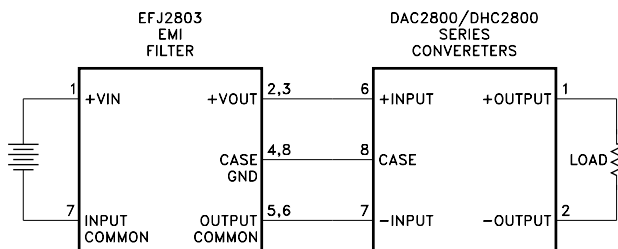
## DESCRIPTION

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.

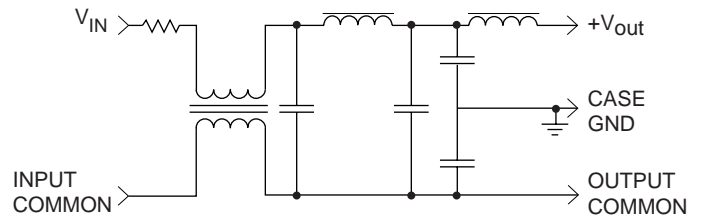
EFJ2803 hybrid EMI filters utilize all ceramic capacitors, surface mount magnetics and ultrasonically bonded aluminum wires to provide reliable operation at all operating temperatures while surviving very high G forces.

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

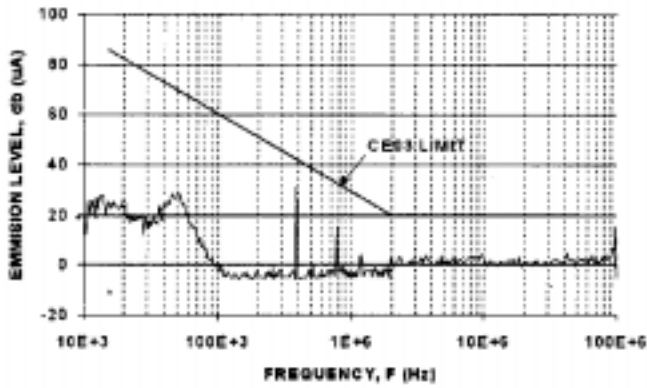
ABSOLUTE MAXIMUM RATINGS	INPUT VOLTAGE RANGE	0-50Vdc
	INPUT VOLTAGE TRANSIENT	80V @ 50ms
	OUTPUT CURRENT <sup>2</sup>	3Adc
	TEMPERATURE RANGE, storage	-65 to 150°C.
	OPERATING TEMPERATURE, case	-55 to ±125°C.

### SPECIFICATIONS

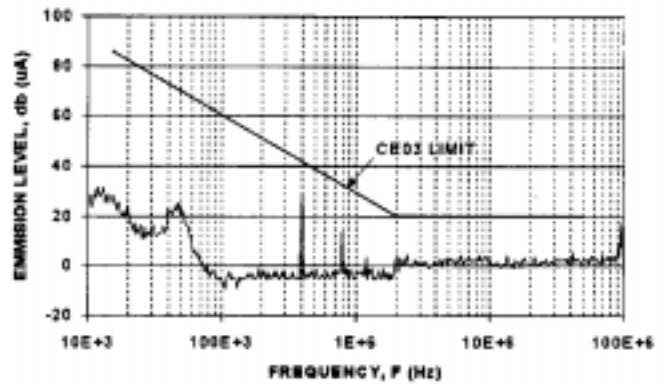
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
INPUT VOLTAGE	STEADY STATE	0	28	40	V
INPUT CURRENT	DC			3	A
OUTPUT VOLTAGE	STEADY STATE		$V_{out} = V_{in} - I_{in}(RDC)$		Vdc
OUTPUT CURRENT	STEADY STATE			3	A
DC RESISTANCE (Rdc)	T = 125°C		0.5 @ 25°C	0.85	Ohms
DIFFERENTIAL MODE REJECTION	200 Khz	40			db
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.

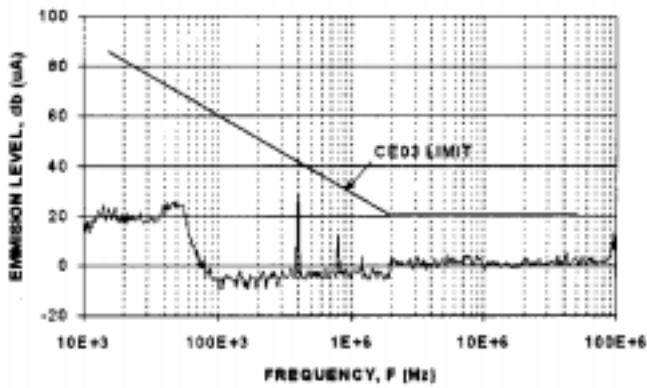
DHC2803S CONVERTER WITH EFJ2803 FILTER



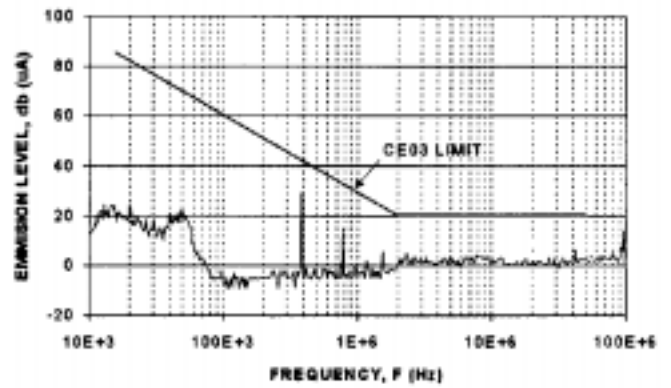
DHC2805S CONVERTER WITH EFJ2803 FILTER



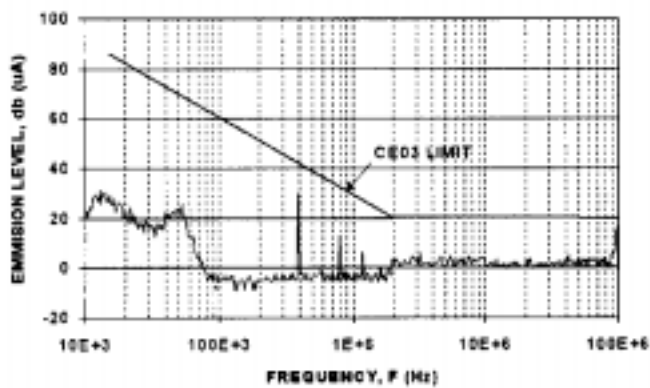
DAC2812S CONVERTER WITH EFJ2803 FILTER



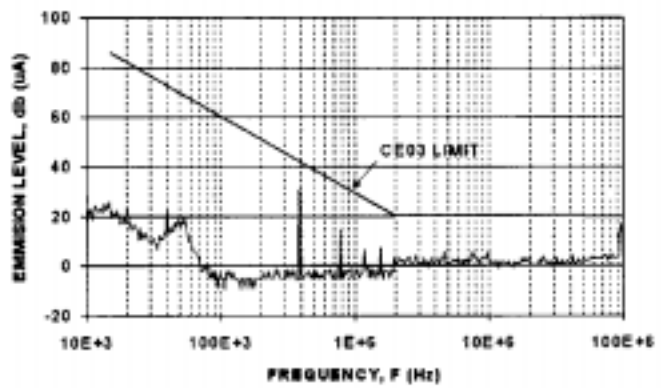
DAC2815SS CONVERTER WITH EFJ2803 FILTER



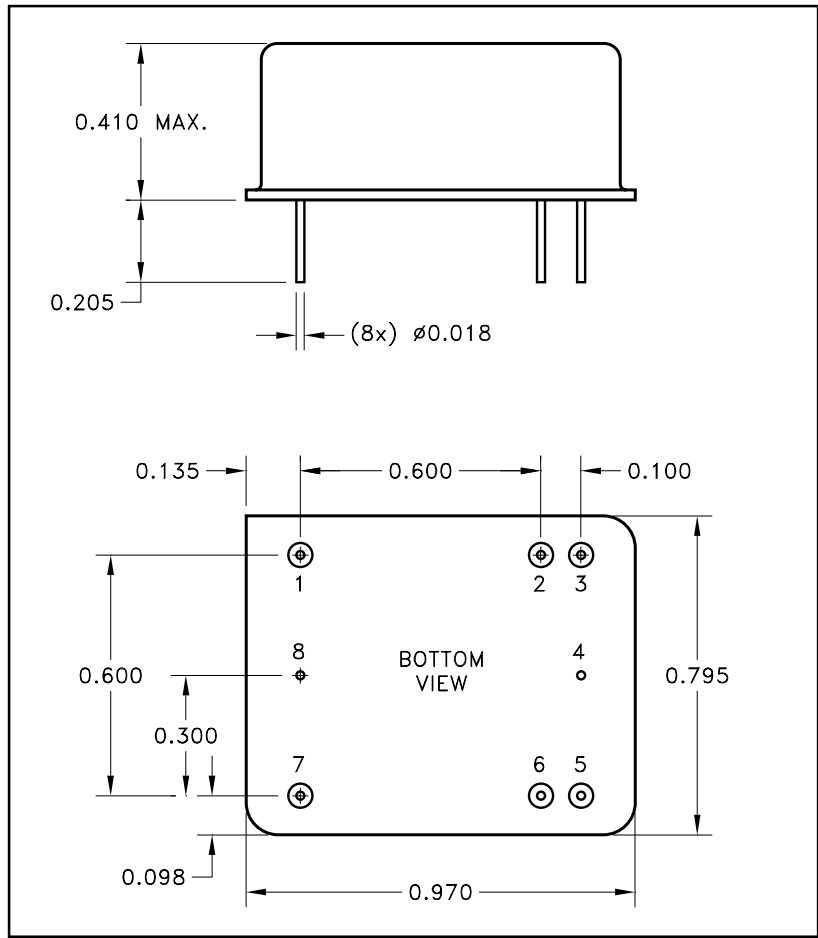
DAC2812D CONVERTER WITH EFJ2803 FILTER



DAC2815D CONVERTER WITH EFJ2803 FILTER



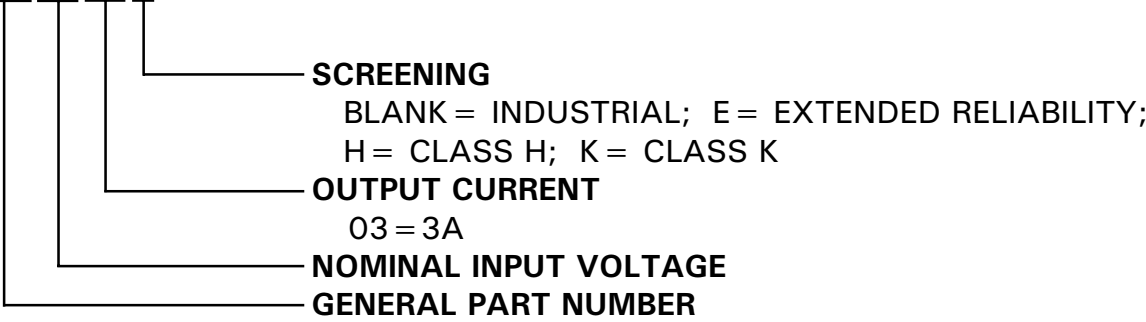
MECHANICAL SPECIFICATIONS



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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