



M.S.KENNEDY CORP.

3A EMI FILTER

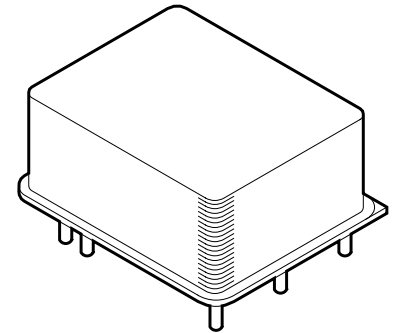
EFJ2803

4707 Dey Road Liverpool, N.Y. 13088

(315) 701-6751

FEATURES:

- All Ceramic Capacitors
- Surface Mount Magnetics
- -55°C to +125°C Operation
- 40dB Differential Mode Rejection at 200KHz
- 60dB Differential Mode Rejection from 500KHz to 50MHz
- 3 Amps Throughput Current
- Meets MIL-STD-461C CE03 Standards For DHC2800 Series DC to DC Converters
- MIL-STD-704 (A Through E) Power Bus Compatibility
- Available to DSCC SMD 96003



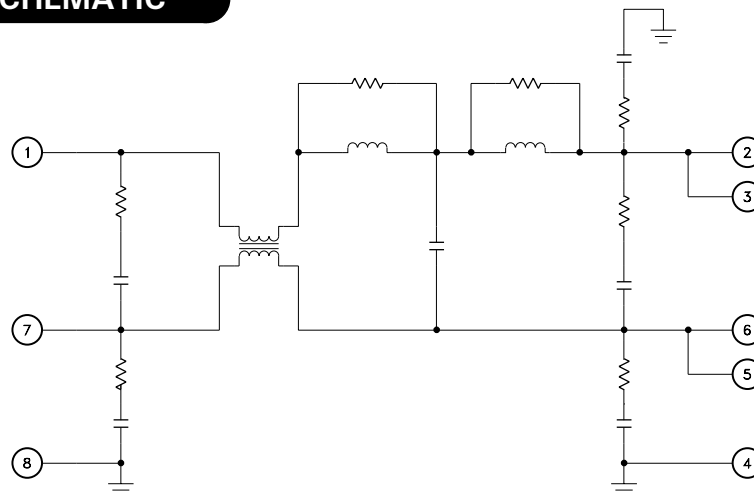
DESCRIPTION:

The EFJ2803 is a high reliability EMI filter for use with DAC2800/DHC2800/DHD2800 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.

The EFJ2803 hybrid EMI filter utilizes 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 stand-alone filter's internal components are all passive devices and selected to operate from input voltages up to and including the peak transient voltage. The filter therefore does not require or utilize transient suppression circuitry and is compatible with the transient specification of a MIL-STD-704 type power bus. When connected to an output device, the output device must be able to operate from compatible voltages. The filter will attenuate spikes, but the duration and magnitude of the spike must be within the operating range of the filter and the device connected to it.

The 8-pin package is hermetically sealed and is DC isolated from the internal circuits. Heat sinking is recommended for full power operation at elevated ambient temperatures.

EQUIVALENT SCHEMATIC



TYPICAL APPLICATIONS

- Airborne Power Systems
- Aerospace Power Systems
- Vehicle Electrical Systems
- Ground Equipment and Test Equipment

PIN-OUT INFORMATION

- | | |
|---------------|-----------------|
| 1 + VIN | 8 Case Ground |
| 2 + VOUT | 7 Input Common |
| 3 + VOUT | 6 Output Common |
| 4 Case Ground | 5 Output Common |

ABSOLUTE MAXIMUM RATINGS

Input Voltage Range 0-50VDC
 Input Voltage Transient 80V @ 50mS
 Storage Temperature Range . . . -65°C to +150°C
 Lead Temperature 300°C
 (10 Seconds Soldering)

Case Operating Temperature Range
 EFJ2803H/E -55°C to +125°C
 EFJ2803 -40°C to +85°C

ELECTRICAL SPECIFICATIONS

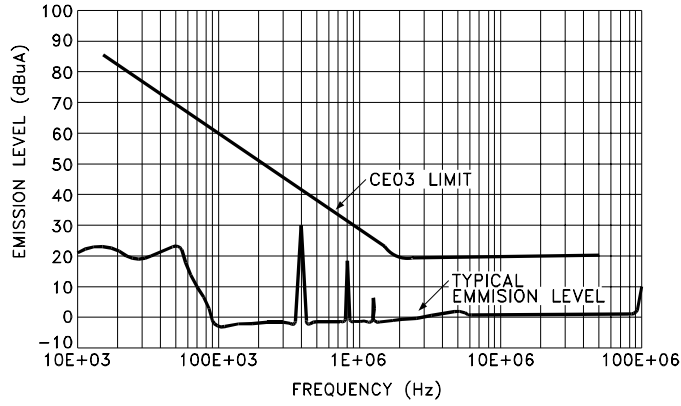
Parameter	Test Conditions	Subgroups	EFJ2803H/E			EFJ2803			Units
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Input Voltage ①	Steady State	1,2,3	0	28	50	0	28	50	V
	Transient 50mS MAX	1	-	-	80	-	-	80	V
Input Current ①	DC	1	-	-	3	-	-	3	A
Output Voltage ②	Steady State	-	-	$V_{OUT} = V_{IN} - I_{in}(R_{DC})$	-	-	$V_{OUT} = V_{IN} - I_{in}(R_{DC})$	-	Vdc
Output Current ①	Steady State	1	-	-	3	-	-	3	A
DC Resistance (RDC)	Steady State	1	-	0.50	0.85	-	0.50	0.85	Ω
Differential Mode Rejection	f = 1KHz	4	-1	0	1	-1	0	-	dB
		5,6	-1	0	1	-	-	-	dB
	f = 200KHz	4	-	40	-	-	40	-	dB
		5,6	-	-	-	-	-	-	dB
	f = 500KHz	4	55	64	-	55	64	-	dB
		5,6	50	-	-	-	-	-	dB
	f = 1MHz	4	60	72	-	60	72	-	dB
		5,6	60	-	-	-	-	-	dB
	f = 5MHz	4	60	70	-	60	70	-	dB
		5,6	60	-	-	-	-	-	dB
	f = 50MHz	4	60	-	-	60	-	-	dB
		5,6	60	-	-	-	-	-	dB
Common Mode Rejection	f = 2MHz-50MHz	4	40	-	-	40	-	-	dB
		5,6	35	-	-	-	-	-	dB
Capacitance ①	Any Pin to Case	7	-	-	4	-	-	4	nF
Isolation	Pin to Case	7	100	-	-	100	-	-	MΩ

NOTES:

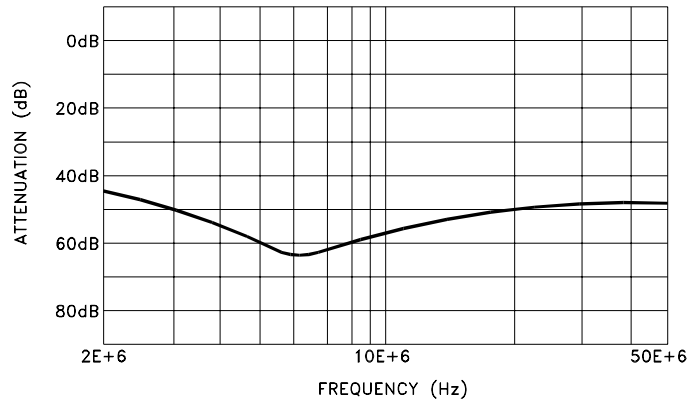
- ① This parameter is guaranteed by design but need not be tested.
- ② Typical parameters are representative of actual device performance but are for reference only.
- ③ Industrial grade and "E" suffix devices shall be tested to subgroup 1,4 and 7 unless otherwise specified.
- ④ Military grade devices ('H' suffix) shall be 100% tested to subgroups 1 through 7.
- ⑤ Subgroup 1,4,7 TA = TC = +25°C
 Subgroup 2,5 TA = TC = +125°C
 Subgroup 3,6 TA = TC = -55°C
- ⑥ Reference DSCC SMD for electrical test parameters and limits for devices purchased as such.

TYPICAL PERFORMANCE CURVES

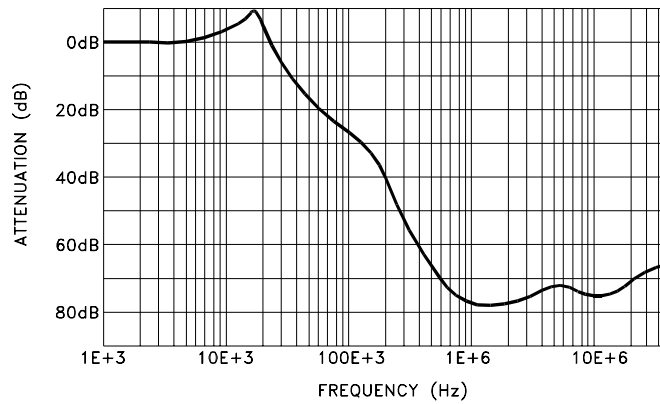
EMISSION LEVEL



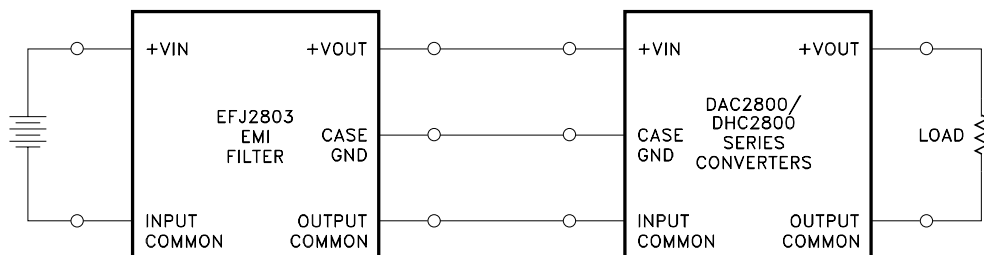
COMMON MODE REJECTION



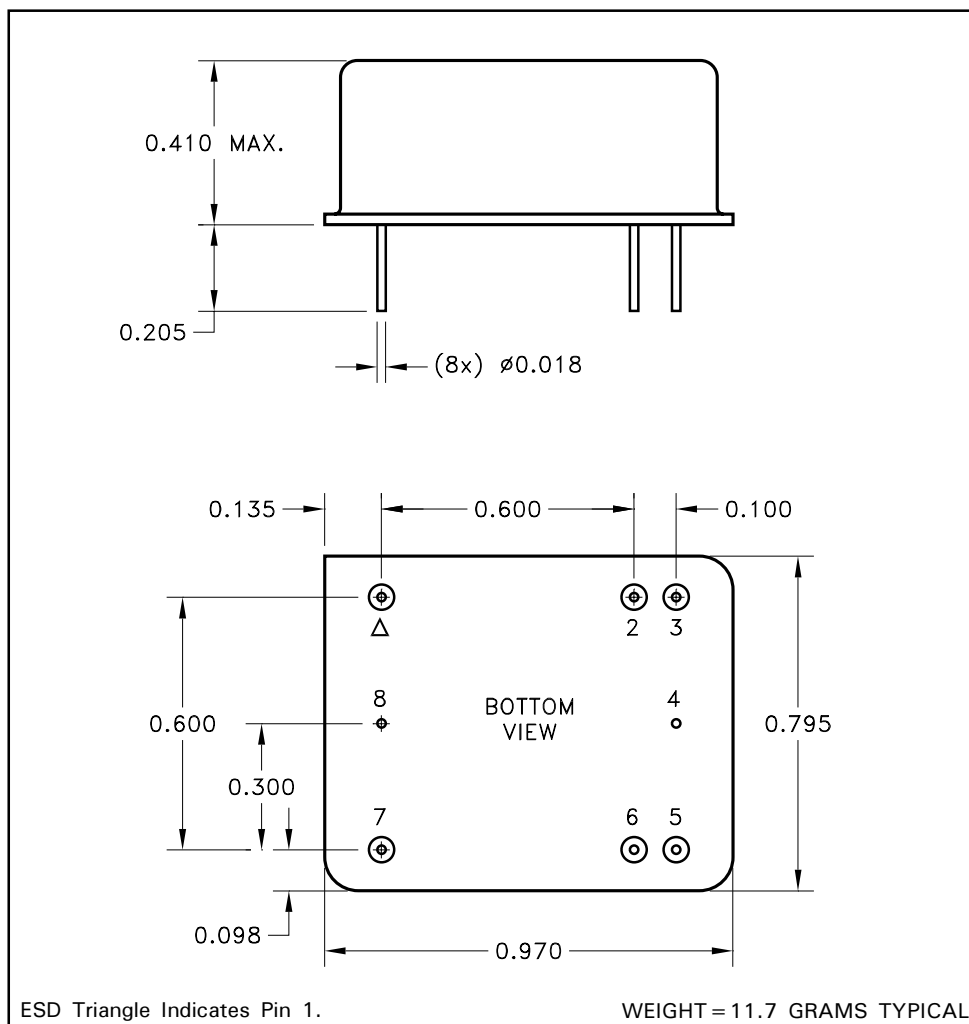
DIFFERENTIAL MODE REJECTION



TYPICAL APPLICATION



MECHANICAL SPECIFICATIONS



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

ORDERING INFORMATION

Part Number	Screening Level
EFJ2803	Industrial
EFJ2803E	Extended Reliability
EFJ2803H	MIL-PRF-38534 Class H
96003	DSCC-SMD for EFJ2803

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