

HI-REL DESIGN

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

FEATURES

- -55° TO +125°C OPERATION
- 50db MINIMUM DIFFERENTIAL MODE REJECTION AT 500 KHz
- 5.5 AMPS THROUGHPUT CURRENT
- MEETS MIL-STD-461C CE03 STANDARDS FOR APEX DB2800 SERIES DC-DC CONVERTERS
- MIL-STD-704A THROUGH E POWER BUS COMPATIBILITY

DESCRIPTION

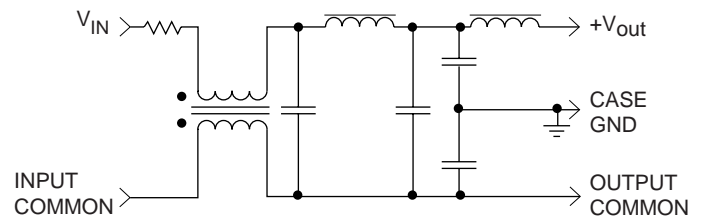
The FDB461 is a high reliability EMI filter for use with Apex DB2800 series of DC-DC converters. This filter has been designed to reduce the input line reflected ripple current to within the limit of MIL-STD-461C, CE03.

FDB461 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.

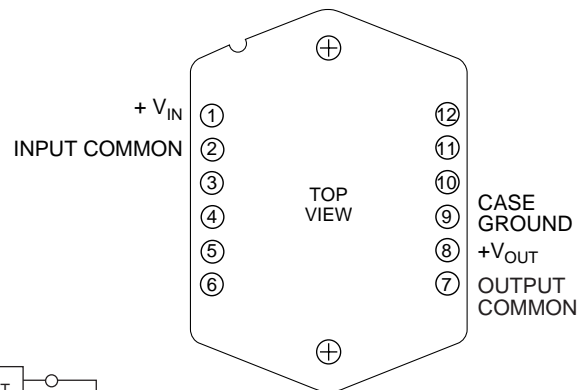
The 12-pin MO-127 High Profile Dip™ package (see package outlines) allows connection to a heatsink and is hermetically sealed and isolated from the internal circuits. Heat sinking is recommended for full power operation at elevated ambient temperatures.



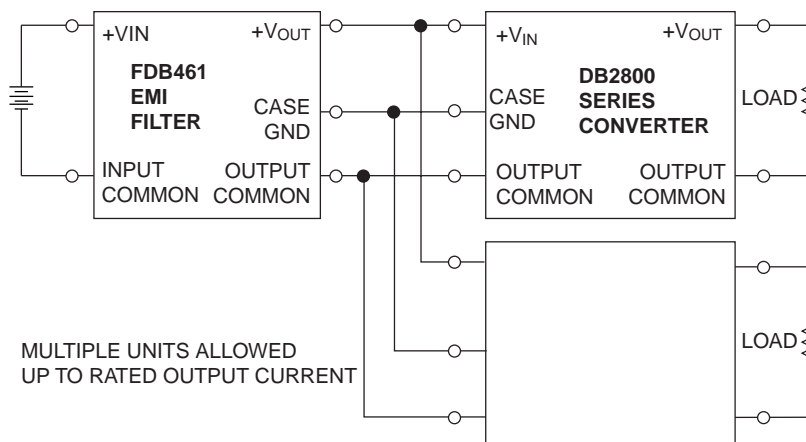
EQUIVALENT SCHEMATIC



EXTERNAL CONNECTIONS



TYPICAL APPLICATION



FDB461

ABSOLUTE MAXIMUM RATINGS SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS

INPUT VOLTAGE RANGE	0-50Vdc
INPUT VOLTAGE TRANSIENT	50V @ 50μs
TEMPERATURE RANGE, storage	-65 to 150°C.
OPERATING TEMPERATURE, case	-25 to 85°C.

SPECIFICATIONS

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
INPUT VOLTAGE	STEADY STATE	0	28	40	V
INPUT VOLTAGE	TRANSIENT 50 μ sec. MAX			50	V
INPUT CURRENT	DC			5.5	A
OUTPUT VOLTAGE	STEADY STATE		$V_{out} = V_{in} - I_{in}(RDC)$		Vdc
OUTPUT CURRENT	RIPPLE			0.3	A rms
OUTPUT CURRENT	STEADY STATE			5.5	A
DC RESISTANCE (Rdc)	T = 25°C		0.20	0.35	Ohms
NOISE REDUCTION	200 Khz	35	40		db
NOISE REDUCTION	500 KHz	50	60		db
CAPACITANCE	ANY PIN TO CASE			4.7	μF
ISOLATION	ANY PIN TO CASE, 500 Vdc	100			MOhm
OPERATING TEMPERATURE RANGE	CASE BASEPLATE	-55		+125	°C
STORAGE TEMPERATURE RANGE	CASE BASEPLATE	-65		+150	°C

- NOTES: 1. Tcase= -55°C to 125°C unless otherwise specified.
2. Longterm operation at the maximum temperature will result in reduced product life. Derate internal power dissipation to achieve high MTTF.

TYPICAL PERFORMANCE GRAPHS

