

NON-ISOLATED DC/DC CONVERTERS

12V Input / 0.9V – 5.0V Output / 15A



V7PF-15A Series PRELIMINARY

- Industry standard pinout
- High efficiency means less power dissipation
- Remote on/off
- Overcurrent protection



Description

The V7PF-15A Series are non-isolated step down DC/DC converters that operate from a nominal 12V source. These converters are available in a range of output voltages from 0.9V to 5.0V. They are packaged in an industry standard single-in-line footprint and provide a maximum 15A output. Standard features include remote on/off, over current protection, thermal protection, output voltage adjust and remote sense. These products maybe used almost anywhere low-voltage silicon is being employed and a 12V source is available. Typical applications include file servers, routers, line cards, and other computing and communications equipment.

Part Selection

Output Voltage	Input Voltage	Max. Output Current	Max. Output Power	Typical Eff. (5V out)	Model Number
0.9 – 5.0V	12V	15A	75W	92%	V7PF-15A1A0
1.2 – 5.0V	12V	15A	75W	92%	V7PF-15A1AC

Input Specifications

Parameter	Min	Typ	Max	Notes
Input Voltage Range	10.8VDC		13.2 VDC	
Input Current (full load)			6.9A	At 5.0V out, full load
Reflected Ripple Current			120mA p-p	With a simulated source impedance of 1500nH, 5Hz to 20 MHz

Output Specifications

Parameter	Min	Typ	Max	Notes
Output Current	0A		15A	
Setpoint Accuracy	-2%		+2%	
Total Regulation 5V 2.5V 1.2V 0.9V			55mV 33mV 21mV 17mV	Regulation over all operating conditions and temperatures.
Ripple and Noise			50mV pk-pk / 25mV rms	0 to 20MHz Bandwidth Tested with .01uF Ceramic, 10uF Al and 680uF OSCON capacitors on output.
Output Capacitance 5V 2.5V 1.2V 0.9V	680uF		5080uF 7640uF 9680uF 11000uF	

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Output Specifications (continued)

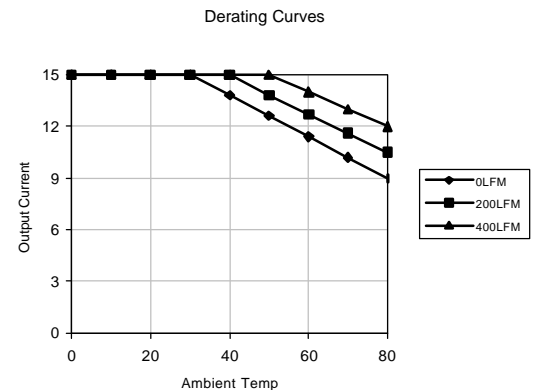
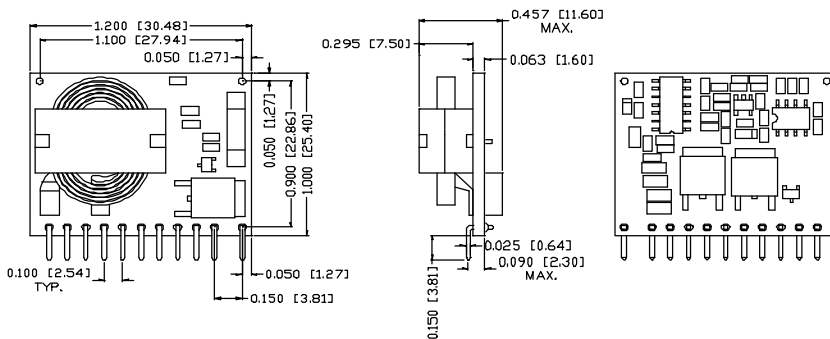
Parameter	Min	Typ	Max	Notes
Transient Response Max deviation Recovery to within $\pm 1\%$			100mV 200uS	di/dt = 0.1A/uS, Vin = 12VDC Ta = 25°C, 50-100% load change, Cout = 680uF.

General Specifications

Parameter	Specification
Switching Frequency	200kHz typical (fixed)
Dimensions	
inches	1.20 x 1.00 x 0.46
mm	30.5 x 25.4 x 11.6
Weight	14.2 g
Operating Temperature	0°C to 80°C (see curve)
Non-Operating Temperature	-40°C to 125°C
Protection Features	
Short circuit	Continuous
Over current	130% to 250% max Io
Undervoltage	UVLO Vin < 9.8V
Remote On/Off	Active High
Efficiency	
5V	92%
2.5V	87%
1.2V	79%

Pin Connections

Pin	Function
1	Vout
2	Vout
3	Vout
4	Trim
5	Output Enable
6	Power Good
7	GND
8	GND
9	Reserved
10	Vin
11	Vin



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CORPORATE

Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302
Tel 201-432-0463
Fax 201-432-9542
www.belfuse.com

FAR EAST

Bel Fuse Ltd.
8F/ 8 Luk Hop Street
San Po Kong
Kowloon, Hong Kong
Tel 852-2328-5515
Fax 852-2352-3706
www.belfuse.com

EUROPE

Bel Fuse Europe Ltd.
Preston Technology Management Centre
Marsh Lane, Suite G7, Preston
Lancashire, PR1 8UD, U.K.
Tel 44-1772-556601
Fax 44-1772-888366
www.belfuse.com