

Bus Converter

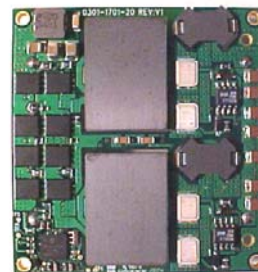
48V Input / 9.4V Output / 70A

bel
POWER PRODUCTS

07CN-70S10L

PRELIMINARY

- Ideal for Intermediate Bus Architectures
- Industry standard half-brick package
- Up to 500W at 96.5% efficiency
- 1500V isolation
- Safety Agency Approvals



Description

The 07CN-70S “Cimarron” Series are isolated DC/DC converters that operate from a nominal 48V source. These converters are intended to provide isolation and step down to generate an intermediate bus for the purpose of powering non-isolated Point-of-Load (POL) converters. These units will provide up to 500W of output power from a 48V input. These units are designed to be highly efficient and very low cost and are thus unregulated. The downstream POL converters will provide the precise regulation required by the load. Features include remote on/off, over current protection and undervoltage lockout. These converters are provided in an industry standard half-brick package.

Part Selection

Output Voltage	Input Voltage	Max. Output Current	Max. Output Power	Typical Efficiency	Model Number
9.4V	48V	70A	500W	96.5%	07CN-70S10L

Input Specifications

Parameter	Min	Typ	Max	Notes
Input Voltage Range	36 VDC		55 VDC	
Input Current (no load)			165mA	
Input Current (full load)			15A	
Reflected Ripple Current (pk-pk)			5mA rms 15mA pk-pk	with a 12uH source inductor at nom. Vin and full load.
Undervoltage Lockout				
Turn-on		35 VDC		
Turn off		33 VDC		
Overvoltage Lockout		57.5 VDC		

Output Specifications

Parameter	Min	Typ	Max	Notes
Output Voltage				
36Vin		7.1		Setpoint at no load.
48Vin		9.4		
55Vin		10.8		
Output Current	0A		70A	
Output Power			500W	
Load Regulation		0.25V		
Ripple and Noise			160mV pk-pk	0 to 20MHz Bandwidth Use 4, 1uF ceramic caps and 2, 15uF tantalum capacitor on output
Load Capacitance	0uF		3000uF	

Bus Converter

48V Input / 9.4V Output / 70A



Output Specifications (continued)

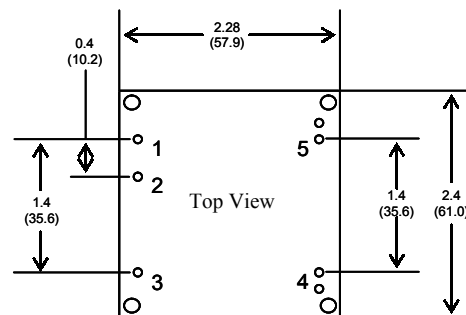
Parameter	Min	Typ	Max	Notes
Transient Response Max deviation Recovery to within $\pm 1\%$		150mV 150uS	200mV 200uS	di/dt = 0.1A/uS, Vin = 48VDC Ta = 25°C, 25% load change.

General Specifications

Parameter	Specification
Switching Frequency	100kHz typical (fixed)
Dimensions	inches 2.28 x 2.4 x .41 mm 57.9 x 61.0 x 10.4
Weight	TBD
Operating Temperature	-40°C to 85°C
Non-Operating Temperature	-55°C to 125°C
Overtemp Shutdown	135°C (10°C hysteresis) Note: measured on Q9
Protection Features	Latching Short circuit 110% to 125% max Io Over current UVLO Vin < 35.0 Undervoltage OVSD Vin > 57.0 Overvoltage
Remote On/Off	Active Low Low: 0V to 0.6V (Optional Active High) High: 1.0 V to 18V Turn on delay 3mS (typ.) Output voltage rise time 6.5mS (typ.)
Safety Agency Approvals (pending)	UL / cUL Recognized Certified to EN60950

Pin Connections

Pin	Function
1	+ Vin
2	Remote On/Off
3	- Vin
4	- Vout
5	+ Vout



©2004 Bel Fuse Inc. Specifications subject to change without notice 021104

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