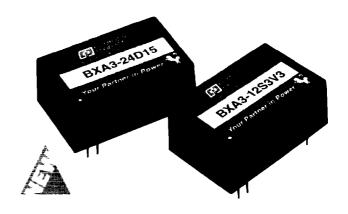
## **BXA3 SERIES**

## Single and dual outputs

Recommended for new design-ins

- 3 Watts in DIP Package
- 21 models including 3.3VDC output
- Wide input ranges 9-18V, 18-36V, 36-75V
- FCC, VDE limit B
- Indefinite short circuit protection
- Overvoltage protection standard
- Operating temperature range -25°C to +105°C
- Input voltage range to prETS300-132
- Pin compatible with DR series

The BXA3 Series of DC/DC converters is designed to offer the optimum cost/benefit power solution for a wide variety of applications including public and private telecommunications, industrial systems and process and test equipment. The series consists of 21 models with input voltages of 9-18VDC, 18-36VDC and 36-75VDC, and offers standard output voltages of



#### **2 YEAR WARRANTY**

3.3V, 5V, 12V and 15V in both single and dual output configurations. Indefinite short circuit protection, overvoltage protection, 60mV output ripple and FCC, VDE level A conducted noise compliance minimise design-in time, cost and eliminate the need for external components.

#### **SPECIFICATION**

ALL SPECIFICATIONS ARE TYPICAL AT NOMINAL INPUT, FULL LOAD AND 25 C UNLESS OTHERWISE STATED

OUTPUT SPECIFICATION	ONS	
Voltage accuracy		±1.0%
Line regulation	LL-HL, all outputs	±2.5%
Load regulation	FL-NL	±2.5%
Ripple and noise 5Hz to 20MHz	+5V output	60mV pk-pk, max., 15mV rms
	All others	100mV pk-pk, max., 15mV rms
Temperature coefficient		±0.02%/°C, max.
Over voltage protection	Clamp diode	135% Vout
Short circuit protection		Continuous automatic recovery
INPUT SPECIFICATION	IS	
Input voltage range	12VDC 24VDC 48VDC	9-18VDC 18-36VDC 36-75VDC
Input filter	Suffix "-F". See Note 5 Pi	
Reverse voltage protection	See Note 7	Yes
Max. input rise and fall time	Output remains within 5V/ms specification	

ELECTROMAGNETIC	COMPATIBILITY SPE	CIFICATIONS		
Conducted noise	EN55022, EN55011 Suffix "-F" versions See Notes 5 and 6	Class A		
GENERAL SPECIFICA	TIONS	Committee (Marie Committee)		
Efficiency	See table	76% typical		
Isolation voltage	Input/Output	500VDC		
Switching frequency	Variable	200kHz-1MHz		
Approvals and safety standards (pending)	EN6095	60, IEC950, UL1950 CSA22.2-234/950		
Case material		Non-conductive black plastic Valox 420-SEO		
Material flammability		UL94V-0		
Weight		15g (0.53oz)		
MTBF	MIL-HDBK-217F	800.000 hours		
ENVIRONMENTAL SP	ECIFICATIONS			
Thermal performance	Operating ambient (See derating curve	-25 °C to +105 °C		
	Non-operating amb Derating Cooling	-40 C to +105°C None required Free air convection		
Relative humidity	Non-condensing	5% to 95% RH		
Altitude	Operating Non operating	10,000 feet max. 40,000 feet max.		
Vibration		2.5G rms (approx.) 5Hz to 500Hz		

## 3 Watt Wide input DC/DC converters

INPUT OUTPUT	OUTPUT IN	INPUT	INPUT TYPICAL	REGULATION		MODEL	
VOLTAGE	VOLTAGE	CURRENT (1)	CURRENT (2)	EFFICIENCY	LINE (3)	LOAD (4)	NUMBER (5)
9-18VDC	3.3V	600mA	245mA	68%	±2.5%	±2.5%	BXA3-12S3V3
9-18VDC	5.0V	500mA	285mA	74%	±2.5%	±2.5%	BXA3-12S05
9-18VDC	12.0V	250mA	335mA	75%	±2.5%	±2.5%	BXA3-12S12
9-18VDC	15.0V	200mA	335mA	75%	±2.5%	±2.5%	BXA3-12S15
9-18VDC	±5.0V	±250mA	285mA	75%	±2.5%	±2.5%	BXA3-12D05
9-18VDC	±12.0V	±125mA	335mA	75%	±2.5%	±2.5%	BXA3-12D12
9-18VDC	±15.0V	±100mA	335mA	75%	±2.5%	±2.5%	BXA3-12D15
18-36VDC	3.3V	600mA	122mA	68%	±2.5%	±2.5%	BXA3 24S3V3
18-36VDC	5.0V	500mA	140mA	76%	±2.5%	±2.5%	BXA3-24S05
18-36VDC	12.0V	250mA	165mA	76%	±2.5%	±2.5%	BXA3-24S12
18-36VDC	15.0V	200mA	165mA	76%	±2.5%	±2.5%	BXA3-24S15
18-36VDC	±5.0V	±250mA	140mA	76%	±2.5%	±2.5%	BXA3-24D05
18-36VDC	±12.0V	±125mA	165mA	76%	±2.5%	±2.5%	BXA3-24D12
18-36VDC	±15.0V	±100mA	165mA	76%	±2.5%	±2.5%	BXA3-24D15
36-75VDC	3.3V	600mA	61mA	68%	±2.5%	±2.5%	BXA3-48S3V3
36-75VDC	5.0V	500mA	69mA	76%	±2.5%	±2.5%	BXA3-48S05
36-75VDC	12.0V	250mA	83mA	76%	±2.5%	±2.5%	BXA3-48S12
36-75VDC	15.0V	200mA	83mA	76%	±2.5%	±2.5%	BXA3-48S15
36-75VDC	±5.0V	±250mA	83mA	76%	±2.5%	±2.5%	BXA3-48D05
36-75VDC	±12.0V	±125mA	83mA	76%	±2.5%	±2.5%	BXA3-48D12
36-75VDC	±15.0V	±100mA	83mA	76%	±2.5%	±2.5%	BXA3-48D15

#### Notes

- Maximum. Maximum figure at full foad (nominal).
- Low line to high line.
- Full load to no load.

  An optional internal filter is available. When the filter is added, the BXA3 will meet VDE0871-A, VDE0878-A and EN55022-A. Add the suffix '-F' to
- will meet VDE0871-A, VDE0876-A and ENSS022-A. Add the suit of the model number: e.g. BXA3-12D12-F.

  Conducted Noise filtering to VDE0871-B and ENS5002-B may be accomplished by putting the following capacitors across the input pins.

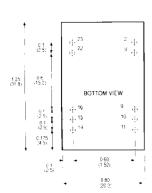
  12VDC 5µF ceramic X7R dielectric type.

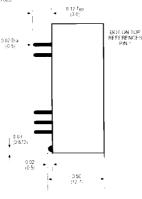
  24VDC 3µF ceramic X7R dielectric type.

48VDC 1µF ceramic X/R dielectric type.

Reverse voltage protection can be implemented by putting a fast blow fuse on the positive input rail. Rate the fuse for 250mA at 48VDC input, 500mA at 24VDC input and 1000mA at 12VDC input.

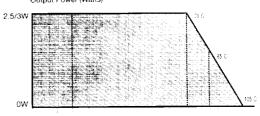






PIN CONNECTIONS				
PIN NUMBER	SINGLE :	OUTPUT		
2	–Vin	–Vin		
3	–Vin	Vin		
22	+Vin	+Vin		
23	+Vin	+Vin		
9	No pin	Common		
10	No pin	No pin		
11	No Connection	-Vout		
14	+Vout	+Vout		
15	No pin	No pin		
16	-Vout	Common		

# DERATING CURVE Output Power (Watts)



25 D 20 C 10 C | 0 C | 10 C | 20 C | 30 C | 40 C | 50 C | 50 C | 70 C | 80 C | 90 C | 10 C C