

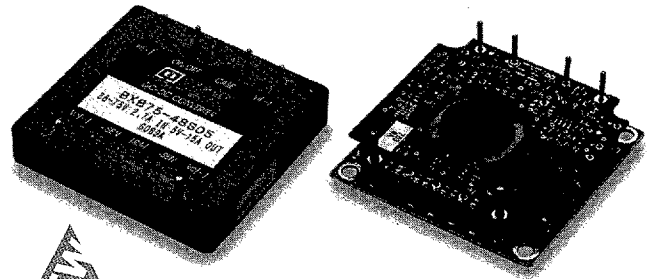
BXB75 SERIES

Single output

Recommended for new design-ins

- Industry standard footprint
- MTBF > 2.7 million hours (Bellcore 332)
- High efficiency up to 90%
- Metal baseplate
- Adjustable output voltage
- Fixed frequency (400kHz)
- High isolation (1500 VDC)
- Separate case ground pin
- 2:1 input range for battery powered applications

The BXB75 Series are high power density DC/DC converters packaged in the industry standard footprint (2.40" x 2.28" x 0.50") to give designers optimum choices when specifying for both new and replacement designs. Suitable for a wide range of applications in nearly any industry, the BXB75 was particularly designed with Communication and Distributed Power applications in mind. Using Bellcore standards, the



2 YEAR WARRANTY

CE (LVD)

MTBF is greater than 2,774,780 hours. Aluminum baseplate technology with four threaded inserts makes heatsink attachment and optimum thermal management easy. The BXB75 Series meet UL, CSA and VDE EN60950 agency standards.

SPECIFICATION

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

OUTPUT SPECIFICATIONS			
Voltage adjustability	3.3V	90% to 115%	
	5V	90% to 110%	
	12V and 15V	75% to 110%	
Set point accuracy		±1.0%	
Line regulation	Low line to high line	±0.01%	
Load regulation	Full load to min load	±0.05%	
Min. load required		2.0% lo max.	
Overshoot	At turn-on and turn off	2.0% max. into lo min	
Undershoot		None	
Ripple and noise (5Hz to 20MHz) See Note 1	3.3V and 5V	100mV pk-pk, 35mV rms	
	12V and 15V	150mV pk-pk, 50mV rms	
Temperature coefficient		±0.01%/°C	
Transient response	See Note 2	±2.0% max. deviation 300µs recovery to within ±1.0%	
Remote sense		0.5VDC transmission line drop compensation	
INPUT SPECIFICATIONS			
Input voltage range	48Vin nominal	36-75VDC	
Input current	Min. load	50mA max.	
Input current (max) See Note 4		3.5 amps max. @ lo max. and Vin = 0 to 75V	
Input reflected ripple	See Note 7	20mA pk-pk	
Remote ON/OFF Logic compatibility ON OFF		Ref. to -input CMOS/TTL 3.5VDC or Open circuit min. 0.8VDC max.	

ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS			
Conducted noise See Note 3	Bellcore 1089		Level A
	FCC part 15		Level A
Electrostatic discharge Input transients - bursts	EN55022, CISPR22		Level A
			IEC801-2
			IEC801-4
GENERAL SPECIFICATIONS			
Efficiency	3.3V		81% typical
	5V		85% typical
	12V		88% typical
	15V		90% typical
Isolation voltage	Input/case		1000VDC
	Input/output		1500VDC
	Output/case		1000VDC
Switching frequency	Fixed	±10%	400kHz
Approvals and safety standards (pending)			EN60950, UL1950 CSA22.2-234/950
Case material			Plastic
Material flammability			UL94V-0
Weight			114g (4.02oz)
MTBF	Bellcore 332 @ 40°C case 80% full load	> 2.7 million hours	
ENVIRONMENTAL SPECIFICATIONS			
Thermal performance	Operating case temp. Non-operating	-40°C to +100°C	
		-50°C to +110°C	
Altitude	Operating: Non-operating:	10,000 feet max. 40,000 feet max.	
Vibration	5Hz to 500Hz	2.4G rms (approx.)	

50 to 75 Watt Wide input DC/DC converters

OUTPUT POWER (MAX)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN)	OUTPUT CURRENT (MAX)	EFFICIENCY (MAX)	REGULATION		MODEL NUMBER
							LINE	LOAD	
50W	36-75VDC	4.0VDC	3.3V	300mA	15A	82%	0.01%	0.05%	BXB75-48S3V3
75W	36-75VDC	7.0VDC	5V	300mA	15A	86%	0.01%	0.05%	BXB75-48S05
75W	36-75VDC	14.5VDC	12V	300mA	6.25A	89%	0.01%	0.05%	BXB75-48S12
75W	36-75VDC	17.5VDC	15V	300mA	5.0A	90%	0.01%	0.05%	BXB75-48S15

Notes

- 1 Measured with 10uF tantalum capacitor and 1uF ceramic capacitor across output.
- 2 $di/dt = 1A/1\mu S$, $V_{in} = 48VDC$, $T_c = 25^\circ C$; load change = 0.5 to max to 0.75 to max. and 0.75 to max. to 0.5 to max.
- 3 Units should be characterized within systems. External components required.
- 4 Input fusing is recommended based on surge current and maximum input current.
- 5 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 6 Simulated source impedance of 12 μH .

PROTECTION

Short circuit	Continuous, automatic recovery
Input surge protection	100VDC for one second max., non-repetitive
Overvoltage protection	Latching (must recycle input power)
Undervoltage protection	Non-latching
Thermal protection	110°C baseplate, automatic recovery

PIN CONNECTIONS

PIN NUMBER	FUNCTION
1	-Vin
2	Case
3	Remote ON/OFF
4	+Vin
5	+Vout
6	+Sense
7	Trim
8	-Sense
9	-Vout

TELECOM SPECIFICATIONS

Embedded DC/DC converters	Bellcore 1003
Central office interface A	prETS300-132

EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using either method shown below.

