Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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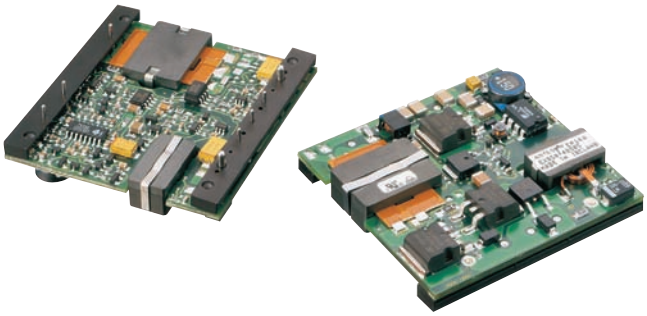
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

EXB50 Series
Single output

Total Power: **20-50W**
Input Voltage: **36-75VDC**
# of Outputs: **Single**



Special Features

- High efficiency topology, 91% typical on EXB50-48S05J
- Industry standard footprint
- Wide operating temperature -40 °C to +70 °C (natural convection)
- 60% to 110% output trim
- No minimum load
- Overvoltage and overtemperature protection
- Remote sense compensation
- Remote ON/OFF
- Available RoHS compliant
- 2 year warranty

Safety

UL/cUL CAN/CSA 22.2
No. 60950-00 : UL 60950
File No. E174104

TÜV Product Service.
Certificate No.
B 03 08 38572 036

Electrical Specifications

Output		
Voltage adjustability:		60% to 110%
Setpoint accuracy:		± 1.5%
Line regulation:	Low line to high line	0.1% max.
Load regulation:	Full load to min. load	0.2% max.
Total error band:		± 3.0%
Minimum load:		0%
Overshoot:	At turn-on and turn-off	None
Undershoot:		None
Ripple and noise: (see Note 1)	5 Hz to 20 MHz	100 mV pk-pk 20 mV rms
Transient response: (See Notes 2 and 8)	48 V models	2.0% peak deviation, 200 µs recovery to within total error band
Remote sense:	(See Note 9)	10% o/p voltage change

All specifications are typical at nominal input, full load at 25 °C unless otherwise stated.

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Network Power

Electrical Specifications cont.

Input		
Input voltage range: (See Note 14)	48 V nominal 100 V 100 ms transient	36 - 75 Vdc
Input current:	48 V no load 48 V Remote OFF	60 mA max. 10 mA max.
Input current (max) (See Note 4)	48 V models	1.7 A max. @ Io max. and Vin = 36 - 75 Vdc
Input reflected ripple: (See Note 6)	48 V models	50 mA (pk-pk) typ.
Remote ON/Off Logic compatibility ON OFF	(See Note 15)	 Open collector ref to -Input Open circuit or > 2 Vdc < 1.2 Vdc
Undervoltage lockout:	48 V Power up 48 V Power down	33.2 V max. 30.9 V min.
Start-up time: (see Note 7)	Power up Remote ON/OFF	30 ms 25 ms
EMC Characteristics		
Conducted emissions:	EN55022 (See Note 3) EN55022 (See Note 3)	Level A Level B
Radiated emissions:	EN55022	Level A
Immunity:	(See Note 13)	
ESD air:	EN61000-4-2 8 kV (NP), 15 kV (RP)	
ESD contact:	EN61000-4-2 6 kV (NP), 8 kV (RP)	
Radiated field enclosure:	EN61000-4-3 10 V/m (NP)	
Conducted (DC power):	EN61000-4-6 10 V/m (NP)	
Conducted (signal)	EN61000-4-6 10 V/m (NP)	
General Specifications		
Efficiency:		See table
Basic insulation:	Input/output	1500 Vdc
Switching frequency:	Fixed	300 kHz typ.
Approvals & Standards:	(See Note 5)	IEC60950/EN60950, UL/cUL1950, CSA C22.2 No. 950
Material flammability:		UL94V-0
Weight:		50 g (1.77 oz)
MTBF:	MIL-HDBK-217F @ 25 °C 100% load ground benign	270,000 hours
Environmental Specifications		
Thermal performance: (See Notes 11, 12) ETS 300 019-2-3	Operating ambient, temperature (natural convection) Non-operating	-40 °C to +70 °C -55 °C to +125 °C Classes T3.1 to T3.5
Altitude: (See Note 10)	3,000 metres 10,000 metres	Derate max. output current by 20% Derate max. output current by 50%

All specifications are typical at nominal input, full load at 25 °C unless otherwise stated.

Ordering Information

Output Power (Max.)	Input Voltage	OVP	Output Voltage	Output Currents		Efficiency (Typ)	Regulation		Model Numbers (16,17)
				(Min)	(Max)		Line	Load	
18 W	36 - 75 Vdc	2.15 Vdc	1.8 V	0 A	10 A	85.7%	± 0.1%	± 0.2%	EXB50-48S1V8J (15)
20 W	36 - 75 Vdc	2.45 Vdc	2 V	0 A	10 A	87.5%	± 0.1%	± 0.2%	EXB50-48S2V0J (15)
25 W	36 - 75 Vdc	2.95 Vdc	2.5 V	0 A	10 A	87.5%	± 0.1%	± 0.2%	EXB50-48S2V5J (15)
33 W	36 - 75 Vdc	4 Vdc	3.3 V	0 A	10 A	90.0%	± 0.1%	± 0.2%	EXB50-48S3V3J (14, 15)
50 W	36 - 75 Vdc	6.15 Vdc	5 V	0 A	10 A	91.0%	± 0.1%	± 0.2%	EXB50-48S05J (15)
50 W	36 - 75 Vdc	14.2 Vdc	12 V	0 A	4.2 A	90.0%	± 0.1%	± 0.2%	EXB50-48S12J (15)

Notes

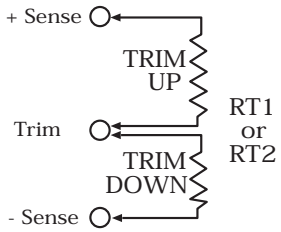
1 Measured as per recommended set-up. 150 mV pk-pk for EXB50-48S12J.
2 di/dt = 0.1 A/µs, Vin = 48 Vdc, Tc = 25 °C, load change = 0.5 lo max. to 0.75 lo max. and 0.75 lo max. to 0.5 lo max.
3 The EXB50 meets level A and level B conducted emissions only with external components connected before the input pins to the converter.
4 Recommended input fusing is 3.15 A HRC 200 V rated fuse on the 48 V.
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. 12 µH inductor in series with +Vin.
7 Start-up into resistive load.
8 Maximum output deviation is 10% inclusive of trim.
9 Contact factory for operation at higher altitude.
10 See Application Note 113 for derating curves.
11 Input transient (48 V) ETS300 132-2 ETR283.
12 100 V, 100 ms transient applies to the EXB50-48S3V3J models. Please add the suffix 'R03' to the model number e.g. EXB50-48S3V3R03J. This is also active low remote ON/OFF.
13 Active low remote ON/OFF available. Please add suffix '-R' to model number e.g. EXB50-48S3V3-RJ.
14 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant. TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
15 NOTICE: Some models do not support all options. Please contact your local Emerson Network Power representative or use the on-line model number search tool at http://www.PowerConversion.com to find a suitable alternative.

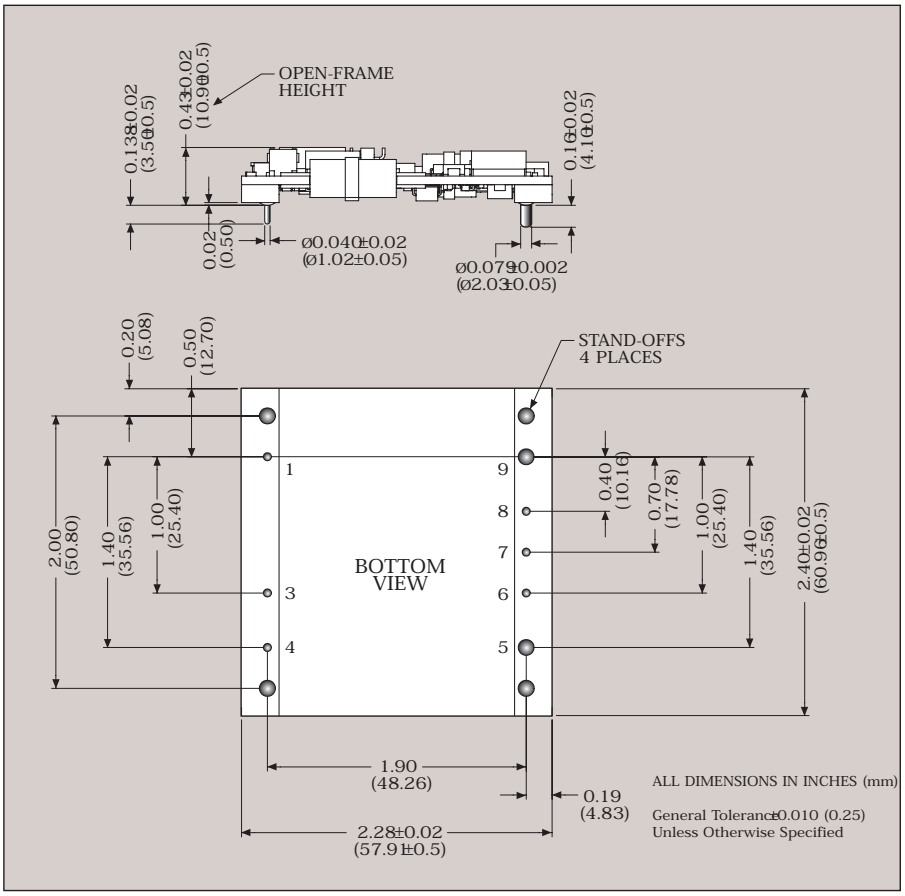
CAUTION: Hazardous internal voltages and high temperatures.
Ensure that unit is not user accessible.

Protection	
Short-circuit	Continuous
Overvoltage	Non-latching clamp
Thermal	120 °C hot spot temperature with automatic recovery
Telecom Specification	
Central office Interface A	ETS300-132-2, Input voltage and current requirements

External Output Trimming

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





Pin Connections	
Pin Number	**Function**
Pin 1	-Vin
Pin 2	No Pin
Pin 3	Remote ON/OFF
Pin 4	+Vin
Pin 5	+Vout
Pin 6	+Sense
Pin 7	Trim
Pin 8	-Sense
Pin 9	-Vout

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