

## **EXB250 SERIES**

Single output







- Wide baseplate temperature, -40°C to +100°C (natural convection)
- 90% to 110% output trim
- · No minimum load
- · Overvoltage protection
- · Remote on/off

The EXB250 is a new high efficiency, open frame, isolated 165 Watt converter series in an industry standard half-brick footprint. The EXB250 delivers very high output current at low voltages, and excellent useable power density for today's high end applications. The design takes advantage of open frame construction to provide a low weight, low thermal impedance baseplate design. The first four models in the series feature an input voltage range of 33 to 75VDC and are available in output voltages of 3.3V, 2.5V, 1.8V and 1.5V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. The EXB250 series also has a remote on/off capability. Overcurrent and overvoltage protection features are included as standard. With full international safety approval including EN60950 (TÜV Rheinland) and UL/cUL1950, the EXB250 reduces compliance costs and time to market.



[ 2 YEAR WARRANTY ]



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

OUTPUT SPECIFICATI	ONS	
Voltage adjustability		90% to 110%
Set point accuracy		±1.6% max.
Line regulation	Low line to high line	e ±0.1% max.
Load regulation	Full load to min. loa	ad ±0.2% max.
Minimum load		0%
Overshoot	At turn-on and turn	-off None
Undershoot		None
Ripple and noise	5Hz to 20MHz	60mV pk-pk 20mV rms
Transient response (See Note 1)	wi	6% max. deviation 150µs recovery to ithin total error band
INPUT SPECIFICATION	NS	
Input voltage range	48Vin nominal	33 to 75VDC
Input current	No load Remote OFF	145mA max. 35mA max.
Input current (max.) (See Note 3)		5.7A max. @ Io max. and Vin = 33 to 75V
Input reflected ripple	(See Note 5)	300mA (pk-pk) typ.
Active high remote ON/ Logic compatibility ON OFF	Open o	(See Note 7) collector ref to -input in circuit or >4.0VDC <1.2VDC
Undervoltage lockout	Power up Power down	32.5V (typ.) 30.5V (typ.)
Start-up time (See Note 6)	Power up Remote ON/OFF	10ms (typ.) 3ms (typ.)

EMC CHARACTERISTICS				
Conducted emissions Radiated emissions Immunity: ESD air ESD contact Radiated field enclosure Conducted (DC power) Conducted (signal) Input transients	EN61000-4-6 10V (N	Level B Level B IP), 15kV (RP) NP), 8kV (RP) (NP) IP)		
GENERAL SPECIFICAT	IONS			
Efficiency		See table		
Operational insulation	Input/output	1500VDC		
Switching frequency	Fixed	400kHz typ.		
Approvals and standards (See Note 4)	EN6095	0 (TÜV Rheinland) UL/cUL1950		
Material flammability		UL94V-0		
Weight		73g (2.6oz)		
MTBF	MIL-HDBK-217F @ 25°C, 100% load ground benign	>224,000 hours		
ENVIRONMENTAL SPECIFICATIONS				
Thermal performance	Operating baseplate temperature Non-operating	-40°C to +100°C -40°C to +125°C		

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGI LINE	JLATION LOAD	MODEL NUMBER <sup>(7)</sup>
90W	33-75VDC	1.8VDC	1.5V	0A	60A	85.5%	±0.1%	±0.2%	EXB250-48S1V5
108W	33-75VDC	2.2VDC	1.8V	0A	60A	87.0%	±0.1%	±0.2%	EXB250-48S1V8
150W	33-75VDC	3.0VDC	2.5V	0A	60A	88.0%	±0.1%	±0.2%	EXB250-48S2V5
165W	33-75VDC	4.0VDC	3.3V	0A	50A	90.0%	±0.1%	±0.2%	EXB250-48S3V3

## **Notes**

- $di/dt = 0.1A/\mu s$ , Vin = 48VDC,  $Tc = 25^{\circ}C$ , load change = 0.5 lo max. to 0.75 lo max. and 0.75 lo max. to 0.5 lo max.
- The EXB250 meets level A and level B conducted emissions only with external components connected before the input pins to the converter.
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- Recommended input fusing is a 10A HRC 200V rated fuse.

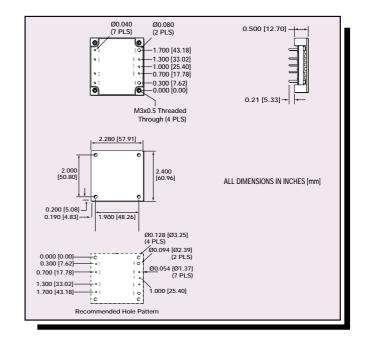
  This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.

  Measured with no external Pi filter. Significant reduction possible with
- external filter.
- Start-up into resistive load.
- Active low remote On/Off is available. Standard product is active high. When ordering active low parts, designate with the Suffix '-R', e.g EXB250-48S3V3-R.

PROTECTION	
Short circuit protection	Continuous
Overvoltage protection	Non-latching clamp
TELECOM SPECIFICATION	
Central office interface A	ETS300-132-2, input voltage and current requirements

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

PIN CONNECTIONS		
PIN NUMBER	FUNCTION	
1	+Vin	
2	Remote On/Off	
3	No Function	
4	-Vin	
5	-Vout	
6	-Sense	
7	Trim	
8	+Sense	
9	+Vout	



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