

## **EXQ125 SERIES**

Single output





- Ultra-high efficiency topology, 91% at 3.3V, 88% typical at 1.8V
- Industry standard footprint
- Wide baseplate temperature, -40°C to +100°C
- 90% to 110% output trim
- · No minimum load
- · Overvoltage protection
- · Remote on/off

The EXQ125 is a new ultra-high efficiency, open frame, isolated converter series in an industry standard quarter-brick footprint that provides up to 100 watts of output power. The EXQ125 delivers very high output current at low voltages, and excellent useable power density for today's high end applications. 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 EXQ125 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 EXQ125 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	IONS	
Voltage adjustability		90% to 110%
Set point accuracy		±1.5% 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		0A
Overshoot	At turn-on and turn	ı-off None
Undershoot		None
Ripple and noise	5Hz to 20MHz	60mV pk-pk 20mV rms
Transient response (See Note 1)	W	2% 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	85mA 20mA
Input current (max.) (See Note 3)	;	3.5A max. @ lo max. and Vin = 33 to 75V
		u 00 to 701
Input reflected ripple	(See Note 5)	300mA (pk-pk) typ.
Input reflected ripple  Active high remote ON/ Logic compatibility ON OFF	OFF Open o	
Active high remote ON/ Logic compatibility ON	OFF Open o	300mA (pk-pk) typ.  (See Note 7) collector ref to -input in circuit or >4.0VDC

EMC CHARACTERISTI	cs			
Conducted emissions Radiated emissions Immunity: ESD air ESD contact Radiated field enclosure Conducted (DC power) Conducted (signal) Input transients		P) Level B Level A  IP), 15kV (RP) IP), 8kV (RP) I (NP) IP)		
GENERAL SPECIFICAT	TIONS			
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		45g (1.6oz)		
MTBF	MIL-HDBK-217F @ 25°C, 100% load ground benign	>300,000 hours		
ENVIRONMENTAL SPECIFICATIONS				
Thermal performance	Operating baseplate temperature Non-operating	-40°C to +100°C -40°C to +125°C		

## 45 to 82.5 Watt High Efficiency DC/DC converters

OUTPUT POWER	INPUT	OVP	OUTPUT	OUTPUT CURRENT	OUTPUT CURRENT	EFFICIENCY	REGI	JLATION	MODEL
(MAX.)	VOLTAGE		VOLTAGE	(MIN.)	(MAX.)	(TYP.)	LINE	LOAD	NUMBER <sup>(7)</sup>
45.0W	33-75VDC	1.8VDC	1.5V	0A	30A	86.5%	±0.1%	±0.2%	EXQ125-48S1V5
54.0W	33-75VDC	2.3VDC	1.8V	0A	30A	87.5%	±0.1%	±0.2%	EXQ125-48S1V8
75.0W	33-75VDC	3.0VDC	2.5V	0A	30A	89.5%	±0.1%	±0.2%	EXQ125-48S2V5
82.5W	33-75VDC	3.9VDC	3.3V	0A	25A	91.0%	±0.1%	±0.2%	EXQ125-48S3V3

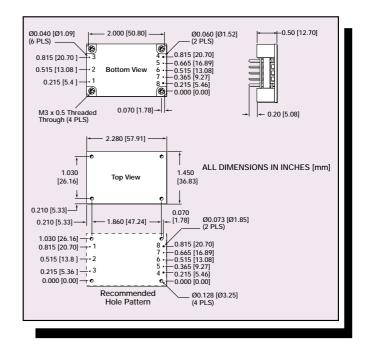
## Notes

- 1 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.
- 2 The EXQ125 meets level A and level B conducted emissions only with external components connected before the input pins to the converter.
- 3 Recommended input fusing is a 5A HRC 200V rated fuse.
- 4 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 5 Measured with no external Pi filter. Significant reduction possible with external filter.
- 6 Start-up into resistive load.
- 7 Active low remote On/Off is available. Standard product is active high. When ordering active low parts, designate with the Suffix '-R', e.g EXQ125-48S3V3-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	On/Off	
3	-Vin	
4	-Vout	
5	-Sense	
6	Trim	
7	+Sense	
8	+Vout	



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