

# NXA66 Series

Single output (Non-Isolated)

## DC-DC CONVERTERS

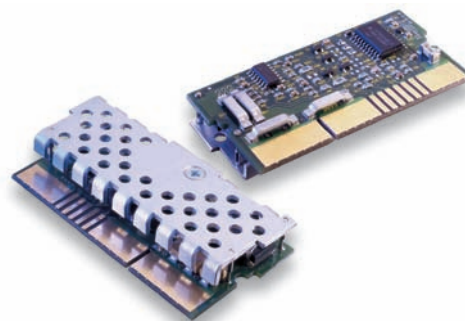
## 66 W Non-isolated DC-DC Converters

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- Transient response from 0 A to rated full load (up to 30 A/μs), recovery within 250 μs
- Democratic current sharing, no need for master/slave configuration
- Programmable output voltage
- Remote enable pin
- Power good signal
- True double ended differential remote sense
- Available RoHS compliant



The NXA66 non-isolated dc-dc converter is targeted at computing applications that require point of load power conversion. The NXA66 is designed to meet the precise voltage and fast transient requirements of today's high performance applications such as workstations, file servers, desktop computers, telecommunications equipment, adapter cards, DSP and data processing. Employing synchronous rectification and democratic current sharing, the NXA66 can be used in a stand-alone configuration, or paralleled as a building block to achieve higher output currents or redundancy. The current sharing specifications are met during static conditions, and transient conditions. The advanced democratic current sharing technique employed by the NXA66 removes the need for cumbersome master/slave combinations. The NXA66 uses gold plated edge tab fingers for a convenient, low impedance interconnect scheme. This also allows system designers to easily accommodate future expansion in their systems.



2 YEAR WARRANTY

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

## SPECIFICATIONS

### OUTPUT SPECIFICATIONS

Voltage adjustability	Vout programmable to 2V5 or 3V3	
Total error band	3V3 output 2V5 output	4.5% 4.5%
Ripple and noise	(20 MHz bandwidth) 150 mV pk-pk max.	
Transient response peak dev. settling time	50% to 75% and back to 1.0%, no external cap.	150 mV 400 μs
Short circuit protection	Isc = 25 A rms	Continuous automatic recovery

### INPUT SPECIFICATIONS

Input voltage range	12 V in nominal	10.8-13.2 Vdc
Input current	No load Remote OFF	100 mA typ. 10 mA max.
UVLO turn ON voltage UVLO turn OFF voltage		10.4 V max. 8.2 V min.
Start-up time	Nominal line	15 ms
Active high remote ON/OFF		
Logic compatibility	Open circuit voltage	Ref. to -input 10.8 Vdc min. 0.8 Vdc max.
ON		
OFF		

### GENERAL SPECIFICATIONS

Efficiency	3V3 output 2V5 output	86% 82%
Switching frequency	Fixed	300 kHz
Approvals and standards	EN60950 Bi-national UL 1950 CSA C22.2 No. 234/950	
Weight	42.6 g (1.5 oz)	
MTBF	Bellcore 332	3,500,000 hours

### ENVIRONMENTAL SPECIFICATIONS

Maximum temperature shock	Operating	5 °C/10 min.
Temperature shock	Operating Non-operating	10 °C/hour 20 °C/hour
Humidity	Operating Storage	85% RH 95% RH
Altitude	Operating Storage	10,000 feet max. 50,000 feet max.
Shock	Operational and non-operational	50 G 11ms half sine wave
Vibration (See Note 3)	Operational and non-operational	0.02 G <sup>2</sup> /Hz max.
Electrostatic discharge	Operating (See Note 4) non-operating	ESD 15 kV ESD 25 kV

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INPUT VOLTAGE	NOMINAL OUTPUT VOLTAGE	NOMINAL OUTPUT CURRENT	MINIMUM EFFICIENCY	MODEL NUMBER (5,6)
12 Vdc	3.3/2.5 Vdc	20 A	86/82%	NXA66-12P3V3CY

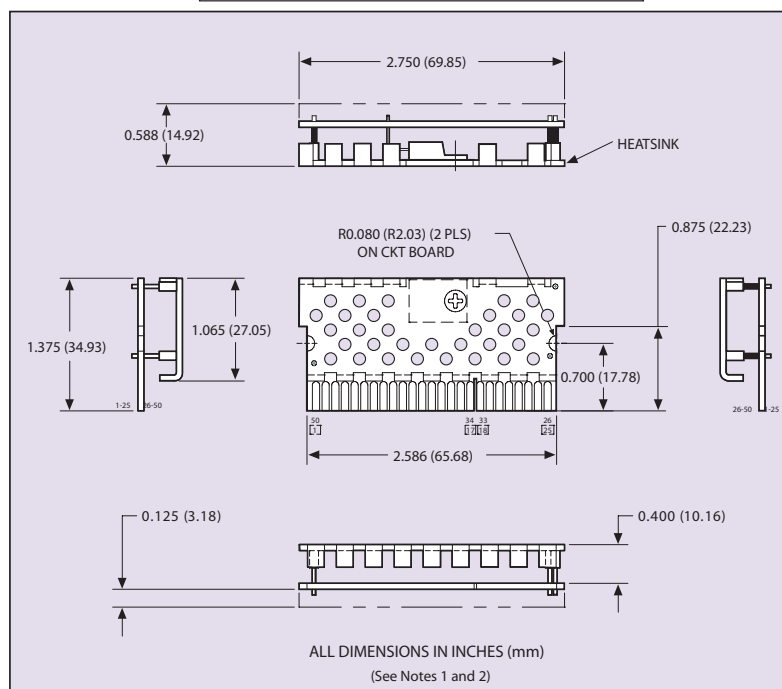
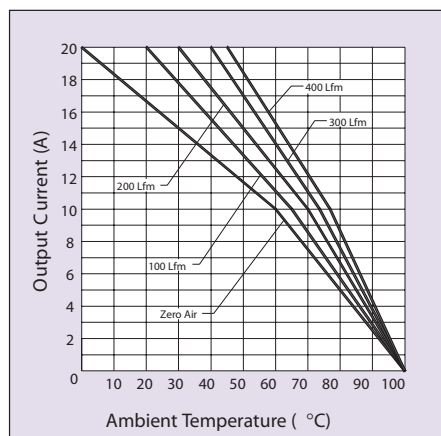
## Notes

- In this view, row B of the edge connector is visible. The leftmost pin is pin 50, and the rightmost pin is pin 26. Row A of the connector is on the opposite side of the unit. Pin 1 is behind pin 50, pin 25 is behind pin 26. See below for pinout.
- Recommended mating connector is AMP 145432 or equivalent. Pin 44 is absent and is used for electrical key. AMP keying plug PN 65025-2 may be placed in the mating connector between pins 33 and 34, and between pins 17 and 18. This keying plug serves as a mechanical key.
- From 5 Hz to 20 Hz, maintaining 0.02 G<sub>rms</sub>/Hz from 20 Hz to 500 Hz, all axes.

## Notes Cond.

- Initialization level; ESD event shall cause no out-of-regulation conditions.
- The 'Y' suffix indicates that these parts are TSE RoHS 5/6 (non Pb-free) compliant.
- NOTICE: Some models do not support all options. Please contact your local Emerson representative or use the on-line model number search tool at <http://www.Emerson.com/EmbeddedPower> to find a suitable alternative.

PIN CONNECTIONS			
PIN NO.	ROW A	ROW B	PIN NO.
1	12 Vin	RTN	50
2	12 Vin	RTN	49
3	12 V in	RTN	48
4	12 Vin	RTN	47
5	12 V in	RTN	46
6	Reserved	RTN	45
7	VSP		
8	PWRGD	Reserved	43
9	OUTEN	Isolated	42
10	Reserved	Reserved	41
11	Vo-sense	Vo-sense rtn	40
12	Vout	Return	39
13	Vout	Return	38
14	Vout	RTN	37
15	Vout	RTN	36
16	Vout	RTN	35
17	Vout	RTN	34
18	Vout	RTN	33
19	Vout	RTN	32
20	Vout	RTN	31
21	Vout	RTN	30
22	Vout	RTN	29
23	Vout	RTN	28
24	Vout	RTN	27
25	Vout	RTN	26



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