Wall Industries, Inc.

DCBOA-48S05UW5

4:1 Ultra Wide Input Voltage Range: 18~75VDC
5VDC Single Output at 1000mA
24-Pin DIP Package with Industry Standard Footprint
5 Watt Isolated DC/DC Power Converter

APPLICATIONS

- Distributed Power Systems
- Telecommunication Applications
- Battery Powered Equipment
- Industrial Applications
- Process Control Equipment
- Transportation Equipment

FEATURES

- 5VDC Single Output
- 4:1 Ultra Wide Input Voltage Range: 18~75VDC
- High Power Density
- 5 Watts Output Power
- 1500VDC I/O Isolation
- No Minimum Load Requirement
- High Efficiency
- Over Voltage and Short Circuit Protection
- Shielded Metal Case with Insulated Base-plate
- 24-Pin DIP Package with Industry Standard Footprint
- Dimensions: 1.25” x 0.80” x 0.40”
- Lead Free Design, RoHS Compliant
- Wide Operating Temperature Range: -40°C to +85°C

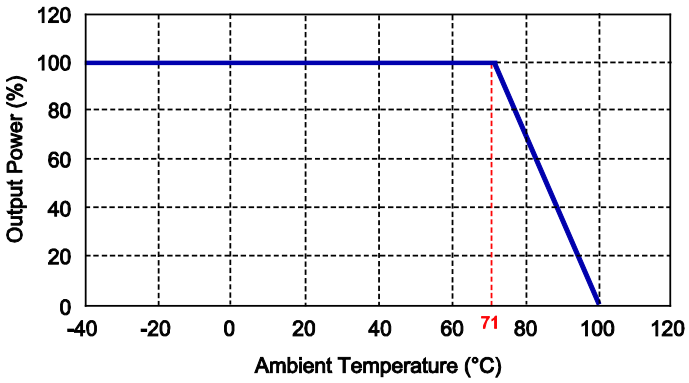
DESCRIPTION

The DCBOA-48S05UW5 is an isolated DC/DC power converter that provides 5 Watts of continuous output power in an industry standard 24-Pin DIP package and footprint. This model has a 5VDC single output and a 4:1 ultra wide input voltage range of 18-75VDC. Some features include 79% high efficiency, 1500VDC I/O isolation, and no minimum load requirement. The DCBOA-48S05UW5 is RoHS compliant and has over voltage and short circuit protection. This converter is best suited for use in distributed power systems, battery powered equipment, process control equipment, transportation equipment, and telecommunication and industrial applications.

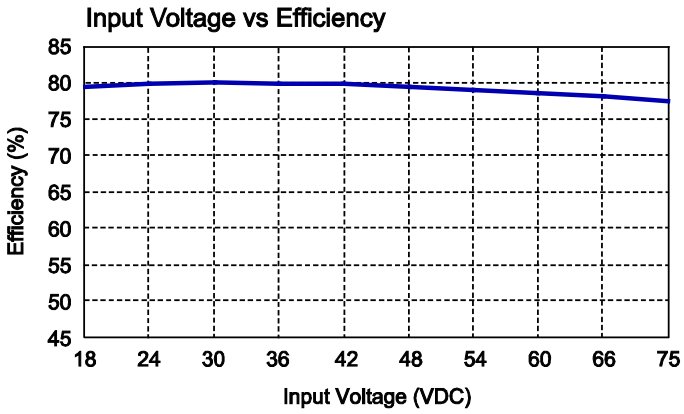
TECHNICAL SPECIFICATIONS				MODEL NO: DCBOA-48S05UW5	
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.					
SPECIFICATION	**TEST CONDITIONS**	**Min**	**Nom**	**Max**	**Unit**
INPUT SPECIFICATIONS					
Input Voltage Range		18	48	75	VDC
Maximum Surge Voltage (100ms)				100	VDC
Input Current	Vin = 48VDC, no load		5		mA
	Vin = 48VDC, full load		139		
	Vin = 48VDC, output shorted		23		
OUTPUT SPECIFICATIONS					
Output Voltage			5		VDC
Voltage Accuracy		4.9 -2%		5.1 +2%	VDC %
Output Current				1000	mA
Minimum Load		0			mA
Maximum Capacitive Load				5460	µF
Line Regulation	LL to HL at full load			±0.5	%
Load Regulation	Unbalanced load 25% to 100% full load			±1	%
Output Power		0		5	W
Ripple & Noise	20MHz Bandwidth			80	mVp-p
Temperature Coefficient				±0.02	%/°C
DYNAMIC CHARACTERISTICS					
Transient Response Overshoot	di/dt=0.8A/µs			±5	% of Vo
Transient Response Settling Time	50% load step change		200		µs
Start-up Time	Vin = 48VDC, full load		500		ms
Switching Frequency			300		KHz
PROTECTION					
Over Voltage Protection			6.2		VDC
Short Circuit Protection		Continuous; automatic recovery			
GENERAL SPECIFICATIONS					
Efficiency	Vin=48VDC, full load		79		%
Isolation Voltage	Input to Output	1500			VDC
Isolation Resistance	Input to Output (500VDC)	10^9			Ω
Isolation Capacitance	Input to Output		300		pF
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	With derating (see derating curve)	-40		+85	°C
Storage Temperature		-55		+105	°C
Maximum Case Surface Temperature				+100	°C
Relative Humidity				95	% RH
Cooling		Free air convection			
MTBF		2,400,000 hours			
PHYSICAL SPECIFICATIONS					
Case Material		Nickel-coated copper			
Base Material		Non-conductive black plastic			
Potting Material		Silicon rubber (UL94V-0)			
Weight		0.59oz (17.2g)			
Dimensions (L x W x H)		1.25 x 0.80 x 0.40 inches (31.8 x 20.3 x 10.2 mm)			
Soldering Temperature	Lead-free wave soldering	260°C/10s (max)			

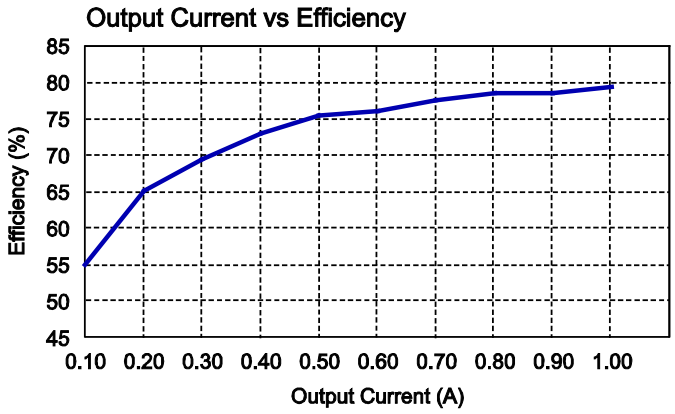
**Due to advances in technology, specifications subject to change without notice.*

DERATING CURVE



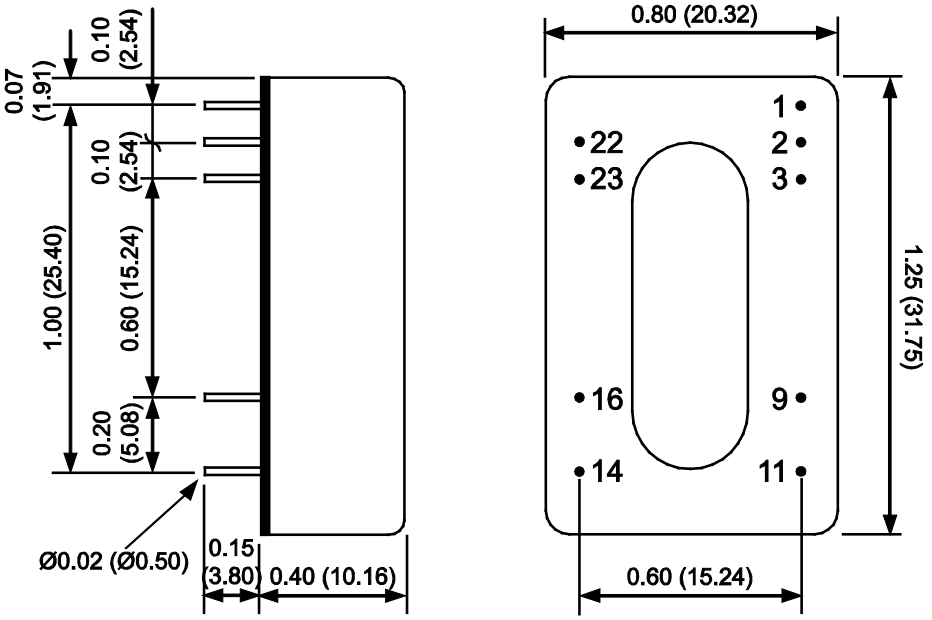
CHARACTERISTICS





MECHANICAL DRAWING

Unit: inches (mm)



PIN CONNECTIONS	
Pin	**Single**
1	No Pin
2	-Vin
3	-Vin
9	No Pin
11	No Function
14	+Vout
16	-Vout
22	+Vin
23	+Vin

Tolerance: ±0.02 (±0.5)

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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