DATASHEET
Rev. B

Wall Industries, Inc.

LTW SERIES

4:1 Ultra Wide Input Voltage Ranges
Triple Outputs
2.0 x 2.0 x 0.52 Inch Package
15W DC/DC Power Converters



FEATURES

- Triple Outputs
- RoHS Compliant
- 4:1 Ultra Wide Input Voltage Ranges
- 15 Watts Output Power
- Efficiency up to 80%
- 100% Burn-in Tested
- Short Circuit Protection
- Remote ON/OFF Control
- Six-Sided Shielding
- 2.0 x 2.0 x 0.52 Inch Package
- 1500VDC I/O Isolation
- Wide Operating Temperature Range: -40°C to +85°C
- MTBF > 1,500,000 Hours
- UL 94V-0 Package Material
- UL60950-1 Approvals
- Custom Solutions Available

APPLICATIONS

- Wireless Networks
- Telecom / Datacom
- Measurement Equipment
- Industry Control Systems
- Semiconductor Equipment

DESCRIPTION

The LTW series of DC/DC power converters provides 15 Watts of continuous output power in a 2.0” x 2.0” x 0.52” package. This series has triple output models with 4:1 ultra wide input voltage ranges of 9-36VDC and 20-72VDC. Some features include 1500VDC I/O isolation, remote ON/OFF control, six-sided shielding, efficiency up to 80%, and short circuit protection. This series is RoHS compliant and has UL 60950-1 safety approvals. These units are well suited for use in wireless networks, telecom/datacom applications, measurement equipment, industry control systems, and semiconductor equipment. All models are 100% burn-in tested.

SPECIFICATIONS: LTW Series

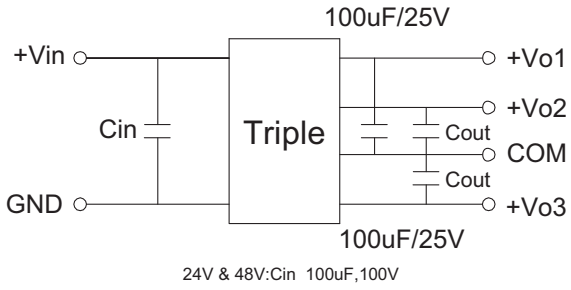
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Nom	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range	24VDC nominal input models	9	24	36	VDC
	48VDC nominal input models	20	48	72	
Input Filter		capacitor			
Remote ON/OFF		yes			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy	5VDC output, Io=1.5A			±5	%
	±12VDC outputs, Io=0.31A			±2	
	±15VDC outputs, Io=0.25A			±2	
Load Regulation	25% to 100% full load			±0.2	%
Line Regulation	low line to high line at full load			±1.0	%
Output Power		0		15	W
Output Current		See Table			
Ripple & Noise	20MHz Bandwidth			100	mVp-p
Transient Response Time	50% load step change		350		µs
PROTECTION					
Short Circuit Protection		Continuous, automatic recovery			
GENERAL SPECIFICATIONS					
Efficiency			80		%
Switching Frequency			100		KHz
Isolation Voltage (input to output)	(2sec/0.5mA)	1500			VDC
Isolation Resistance (input to output)	500VDC	1000			MΩ
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	With derating (see derating curve)	-40		+85	°C
Storage Temperature		-40		+100	°C
Humidity (non-condensing)				95	%
Cooling		Free air convection			
MTBF	MIL-HDBK-217F at 25°C, ground benign	1,500,000 hours			
PHYSICAL SPECIFICATIONS					
Case Material		black coated copper with non-conductive base			
Potting Material		Epoxy (UL94V-0 rated)			
Shielding		Six-sided			
Weight		2.51oz (71.2g)			
Dimensions (L x W x H)		2.0 x 2.0 x 0.52 inches (50.8 x 50.8 x 13.2 mm)			
SAFETY & EMI					
Conducted Emissions		EN55022 Class A			
Radiated Emissions		EN55022 Class A			
Safety Approvals		UL 60950-1			

MODEL SELECTION TABLE					
Model Number		**Input Voltage Range**	**Output Voltage**	**Output Current**	**Output Power**
LTW2412-15EI	Vo_1	24 VDC (9 – 36 VDC)	5 VDC	1.5A	15W
	Vo_2		+12 VDC	0.31A	
	Vo_3		-12 VDC	0.31A	
LTW2415-15EI	Vo_1	24 VDC (9 – 36 VDC)	5 VDC	1.5A	15W
	Vo_2		+15 VDC	0.25A	
	Vo_3		-15VDC	0.25A	
LTW4812-15EI	Vo_1	48 VDC (20 – 72 VDC)	5 VDC	1.5A	15W
	Vo_2		+12 VDC	0.31A	
	Vo_3		-12 VDC	0.31A	
LTW4815-15EI	Vo_1	48 VDC (20 – 72 VDC)	5 VDC	1.5A	15W
	Vo_2		+15 VDC	0.25A	
	Vo_3		-15VDC	0.25A	

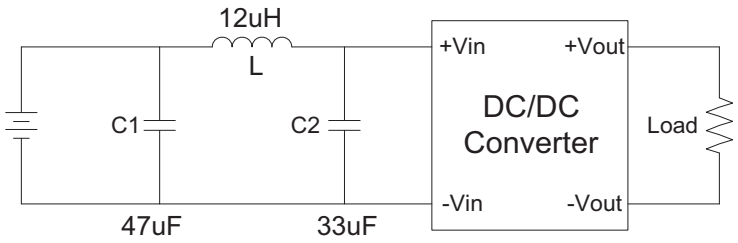
APPLICATIONS

Test Circuit



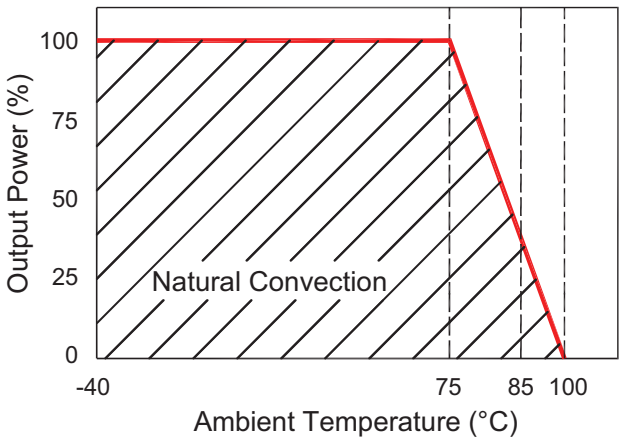
24V & 48V:Cin 100uF,100V

Recommended Filter for EN55022 Class A Compliance

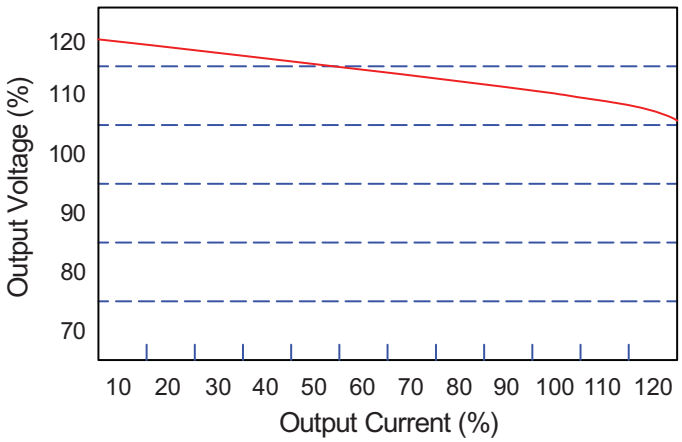


GRAPHS

Derating Curve

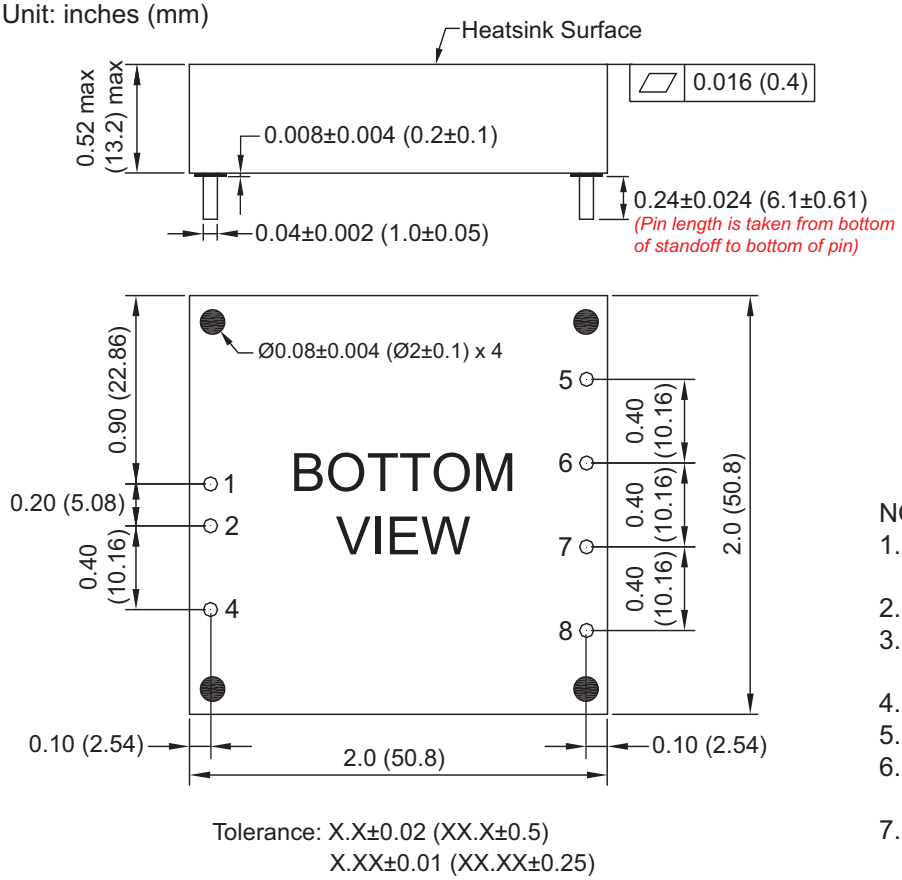


Tolerance



MECHANICAL DRAWING

Unit: inches (mm)



Tolerance: X.X±0.02 (XX.X±0.5)
X.XX±0.01 (XX.XX±0.25)

PIN CONNECTIONS	
Pin	**Triple**
1	+Vin
2	-Vin
4	Control
5	Vo_2
6	Vo_1
7	COM
8	Vo_3

NOTES
1. All case and pin to case are for reference only unless otherwise noted.
2. P.C. pins: 0.04 (1.0) dia x 0.26 (6.60) long.
3. Pin to Pin Tolerance: ±0.01 (0.25)
   Pin Diameter Tolerance: ±0.002 (0.05)
4. 10% minimum load required.
5. Remote pin can be left floating if not used.
6. Significant capacitive load on output may inhibit start-up and operation.
7. All DC/DC converters should be externally fused on the front end for protection.

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 ISO9001-2008 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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