Wall Industries, Inc.

LANK "H" Series
3000VDC I/O Isolation
Single and Dual Output
3 Watt DC/DC Converter
24 Pin DIP & SMT Package
2:1 Wide Input Voltage Range

FEATURES

- 3000VDC I/O Isolation
- Over Current Protection
- MTBF > 3,000,000 Hours
- High Efficiency up to 80%
- 2:1 Wide Input Voltage Range
- 3 Watts Regulated Output Power
- International Safety Standard Approval
- Standard 24 Pin DIP Package and SMT Type Package

UL E193009
TUV
CB
CE MARK

SPECIFICATIONS: *LANK "H" Series*

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Input Voltage Range	5V nominal input	4.5 - 6VDC
	12V nominal input	9 - 18 VDC
	24V nominal input	18 - 36 VDC
	48V nominal input	36 - 75 VDC
Input Filter		Pi Type
Input Surge Voltage (100ms max)	5V input	15VDC
	12V input	36 VDC
	24V input	50 VDC
	48V input	100 VDC
Input Reflected Ripple Current (Note 2) (nominal Vin and full load)		120mAp-p
Start Up Time (nominal Vin and constant resistive load)		30ms typ.

OUTPUT SPECIFICATIONS

Output Voltage		see table
Voltage Accuracy (nominal Vin and full load)		±1%
Output Current		see table
Output Power		3 watts max.
Line Regulation (LL to HL at FL)		±0.2%
Load Regulation (25% to 100% FL)	Single Output	±0.2%
	Dual Output	±2%
Cross Regulation (Dual) (Asymmetrical load 25% / 100% FL)		±5%
Minimum Load (See Note 1)		10% of FL
Ripple/Noise (20 MHz BW)	3.3V and 5V outputs	75mVp-p
	others	1%/p-p of Vout max
Temperature Coefficient		±0.02% / °C max.
Transient Response Recovery Time (25% load step)		500us

PROTECTION SPECIFICATIONS

Over Load Protection (% of full load at nominal input)	180% typ.
Short Circuit Protection.	continuous, automatic recovery

GENERAL SPECIFICATIONS

Efficiency	see table
Switching Frequency	100KHz typ.

GENERAL SPECIFICATIONS (CONTINUED)

Isolation Voltage (Input to Output)	3000VDC min.
Isolation Resistance	10^9 ohms min.
Isolation Capacitance	300pF max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	
Standard	-25°C ~ +71°C
"I" Suffix (See Note 7)	-40°C ~ +71°C
Storage Temperature	-55°C ~ +105°C
Relative Humidity	5% to 95% RH
Thermal Shock	MIL-STD-810D
Vibration	10~55Hz, 10G, 30 minutes along X, Y, and Z
MTBF (See Note 3)	3.69 x 10^6 hours

PHYSICAL SPECIFICATIONS

Weight	
DIP Type	14g (0.48 oz)
SMT Type	15g (0.52 oz)
Dimensions	1.25 x 0.80 x 0.40 inches (31.8 x 20.3 x 10.2 mm)
Case Material	Non-conductive black plastic
Base Material	Non-conductive black plastic
Potting material	Epoxy (UL94-V0)

SAFETY & EMC

Approvals and Standards	IEC60950-1, UL60950-1, EN60950-1	
Conducted Emissions	EN55022	Class A
Radiated Emissions	EN55022	Class A
ESD	EN61000-4-2	Perf. Criteria B
Radiated Immunity	EN61000-4-3	Perf. Criteria A
Fast Transient	EN61000-4-4	Perf. Criteria B
Surge	EN61000-4-5	Perf. Criteria B
Conducted Immunity	EN61000-4-6	Perf. Criteria A

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

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603-778-2300 www.wallindustries.com Fax 603-778-9797

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OUTPUT VOLTAGE / CURRENT RATING CHART

Model Number	Input Range	Output Voltage	Output Current	Input Current (4)	Efficiency (5)	Capacitor Load (6) (max)
LANK53.3W3H	5 VDC (4.5 – 6 VDC)	3.3 VDC	600mA	649mA	66%	2200uF
LANK505W3H		5 VDC	600mA	909mA	70%	1000uF
LANK512W3H		12 VDC	250mA	835mA	76%	170uF
LANK515W3H		15 VDC	200mA	845mA	75%	110uF
LANK505DW3H		± 5 VDC	± 300mA	857mA	74%	± 500uF
LANK512DW3H		± 12 VDC	± 125mA	845mA	75%	± 96uF
LANK515DW3H		± 15 VDC	± 100mA	870mA	73%	± 47uF
LANK123.3W3H	12VDC (9 – 18 VDC)	3.3 VDC	600mA	266mA	70%	2200uF
LANK1205W3H		5 VDC	600mA	353mA	75%	1000uF
LANK1212W3H		12 VDC	250mA	333mA	79%	170uF
LANK1215W3H		15 VDC	200mA	343mA	77%	110uF
LANK1205DW3H		± 5 VDC	± 300mA	348mA	76%	± 500uF
LANK1212DW3H		± 12 VDC	± 125mA	338mA	78%	± 96uF
LANK1215DW3H		± 15 VDC	± 100mA	333mA	79%	± 47uF
LANK243.3W3H	24 VDC (18 – 36 VDC)	3.3 VDC	600mA	123mA	71%	2200uF
LANK2405W3H		5 VDC	600mA	174mA	76%	1000uF
LANK2412W3H		12 VDC	250mA	164mA	80%	170uF
LANK2415W3H		15 VDC	200mA	164mA	80%	110uF
LANK2405DW3H		± 5 VDC	± 300mA	172mA	77%	± 500uF
LANK2412DW3H		± 12 VDC	± 125mA	167mA	79%	± 96uF
LANK2415DW3H		± 15 VDC	± 100mA	167mA	79%	± 47uF
LANK483.3W3H	48VDC (36 – 75 VDC)	3.3 VDC	600mA	61mA	72%	2200uF
LANK4805W3H		5 VDC	600mA	88mA	75%	1000uF
LANK4812W3H		12 VDC	250mA	84mA	79%	170uF
LANK4815W3H		15 VDC	200mA	84mA	79%	110uF
LANK4805DW3H		± 5 VDC	± 300mA	86mA	77%	± 500uF
LANK4812DW3H		± 12 VDC	± 125mA	84mA	79%	± 96uF
LANK4815DW3H		± 15 VDC	± 100mA	84mA	79%	± 47uF

NOTES

1. LANK "H" Series requires a minimum 10% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.
2. Please add an external filter at converter input terminals when measuring input reflected ripple, as figure 1.
   L: Simulated source impedance of 12uH C: Nippon chemi-con KMF series 47uF/100V
3. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40ºC. (Ground fixed and controlled environment)
4. Maximum value at nominal input voltage and full load of standard type.
5. Typical value at nominal input voltage and full load.
6. Test by minimum Vin and constant resistive load.
7. Add suffix "I" for –40°C to +71°C operation.
8. Add suffix "S" for surface mount type.

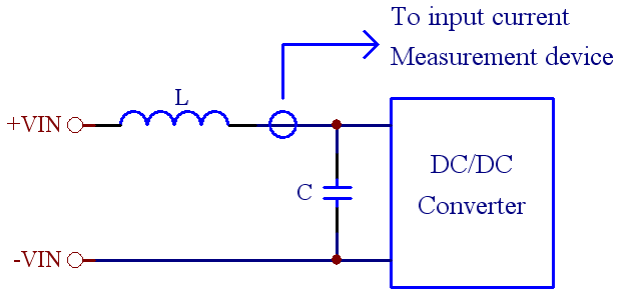

Figure 1

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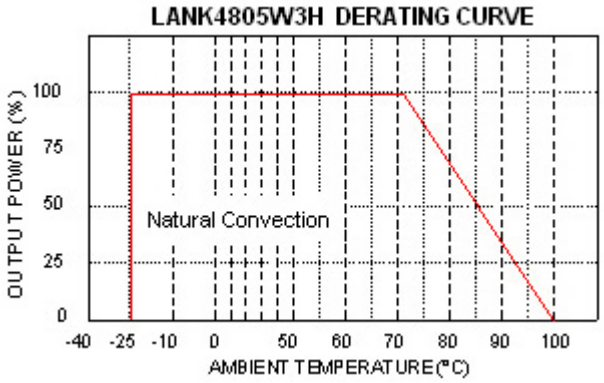
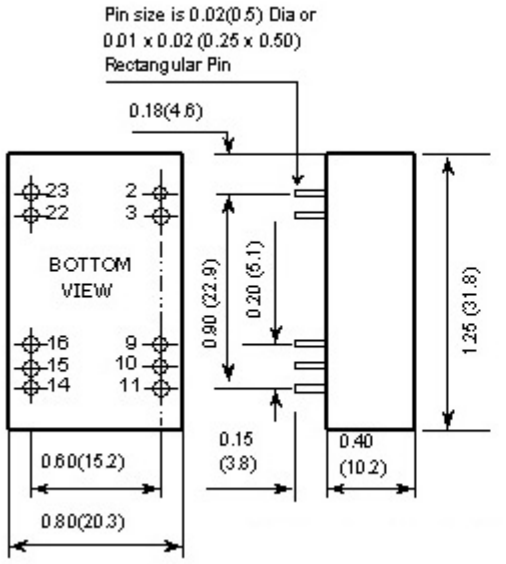
DERATING CURVE



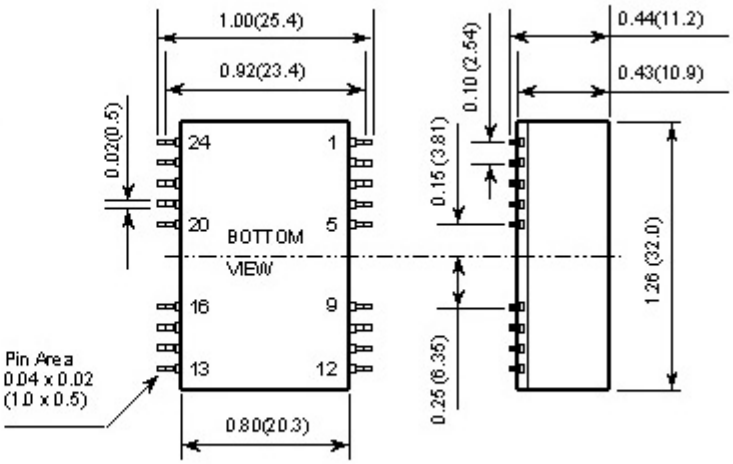
MECHANICAL DRAWING

DIP TYPE



SMT TYPE

(add suffix "S")



1. All dimensions in Inches (mm)
   Tolerance: X.XX±0.02 (X.X±0.5)
   X.XXX±0.01 (X.XX±0.25)
2. Pin pitch tolerance ±0.014(0.35)

DIP PIN CONNECTION					
PIN	**SINGLE**	**DUAL**	**PIN**	**SINGLE**	**DUAL**
2	- INPUT	- INPUT	23	+ INPUT	+ INPUT
3	- INPUT	- INPUT	22	+ INPUT	+ INPUT
9	NC	COMMON	16	- OUTPUT	COMMON
10	NC	NC	15	NC	NC
11	NC	- OUTPUT	14	+ OUTPUT	+ OUTPUT

SMT PIN CONNECTION					
PIN	**SINGLE**	**DUAL**	**PIN**	**SINGLE**	**DUAL**
2	- INPUT	- INPUT	23	+ INPUT	+ INPUT
3	- INPUT	- INPUT	22	+ INPUT	+ INPUT
9	NC	COMMON	16	- OUTPUT	COMMON
10	NC	NC	15	NC	NC
11	NC	- OUTPUT	14	+ OUTPUT	+ OUTPUT
Others	NC	NC	Others	NC	NC