



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



SPECIFICATIONS: LANK "H" Series

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

Table with 2 columns: Input Voltage Range and nominal input values (5V, 12V, 24V, 48V) and their corresponding output ranges (4.5-6VDC, 9-18VDC, 18-36VDC, 36-75VDC).

Input Filter ..... Pi Type

Table with 2 columns: Input Surge Voltage (100ms max) and input values (5V, 12V, 24V, 48V) and their corresponding output surge voltages (15VDC, 36VDC, 50VDC, 100VDC).

Input Reflected Ripple Current (Note 2)..... 120mA<sub>p-p</sub> (nominal Vin and full load)

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 ..... 75mV<sub>p-p</sub> 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<sup>9</sup> 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<sup>6</sup> 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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**OUTPUT VOLTAGE / CURRENT RATING CHART**

Model Number	Input Range	Output Voltage	Output Current	Input Current <sup>(4)</sup>	Efficiency <sup>(5)</sup>	Capacitor Load <sup>(6)</sup> (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%
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%
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%
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**

- 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.
- 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
- BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. (Ground fixed and controlled environment)
- Maximum value at nominal input voltage and full load of standard type.
- Typical value at nominal input voltage and full load.
- Test by minimum Vin and constant resistive load.
- Add suffix "I" for -40°C to +71°C operation.
- Add suffix "S" for surface mount type.

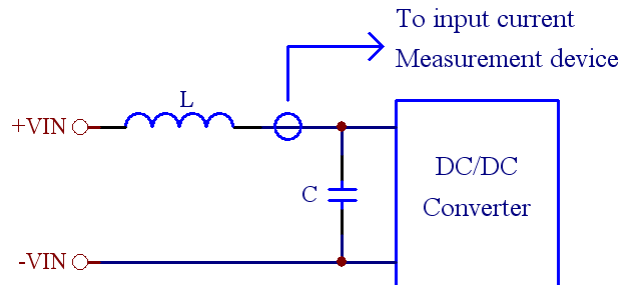


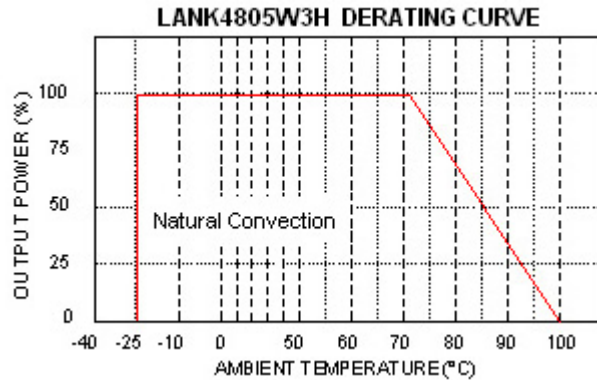
Figure 1



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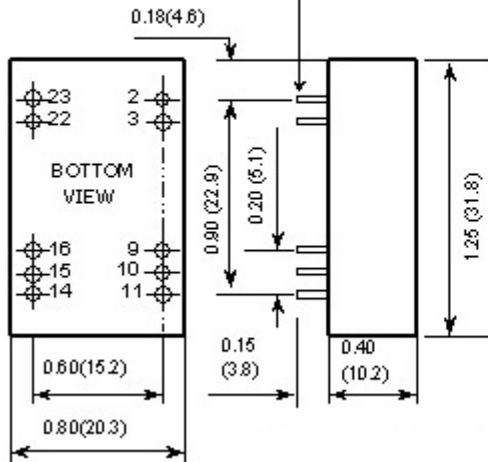
DERATING CURVE



MECHANICAL DRAWING

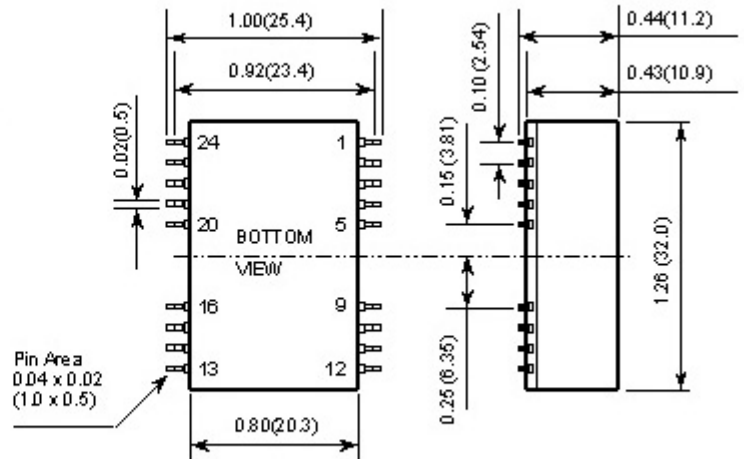
DIP TYPE

Pin size is 0.02(0.5) Dia or  
0.01 x 0.02 (0.25 x 0.50)  
Rectangular Pin



SMT TYPE

(add suffix "S")



- All dimensions in Inches (mm)  
Tolerance: X.XX±0.02 (X.X±0.5)  
X.XXX±0.01 (X.XX±0.25)
- 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