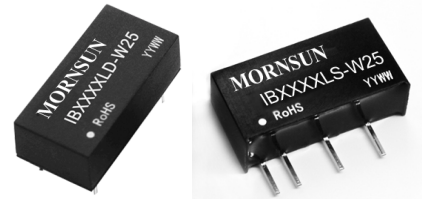


IB_LS-W25 & IB_LD-W25 Series

0.25W, FIXED INPUT, ISOLATED & REGULATED SINGLE OUTPUT DC-DC CONVERTER



RoHS

FEATURES

- Small Footprint
- SIP/DIP Package
- Low Ripple and good EMC features
- Temperature Range: -40°C ~ +85°C
- No Heatsink Required
- No External Component Required
- 1KVDC Isolation
- Internal SMD construction
- Continuous Short Circuit Protection
- Industry Standard Pinout
- RoHS Compliance

APPLICATIONS

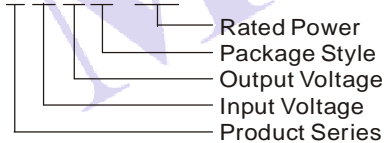
The IB_LS-W25 & IB_LD-W25 series are specially designed for applications where a single power supply is highly isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:

- 1) Where the voltage of the input power supply is fixed (voltage variation $\leq \pm 5\%$);
- 2) Where isolation is necessary between input and output (isolation voltage $\leq 1000\text{VDC}$);
- 3) Where the regulation of the output voltage and the output ripple and noise are demanded.

MODEL SELECTION

IB0505LS-W25



PRODUCT PROGRAM

Part Number	Input		Output			Efficiency (% Typ.)	Package
	Voltage (VDC)		Voltage (VDC)	Current (mA)			
	Nominal	Range		Max.	Min.		
IB0505LD-W25	5	4.75-5.25	5	50	5	56	DIP
IB0505LS-W25			5	50	5		
IB1205LS-W25	12	11.4-12.6	5	50	5	59	SIP
IB2405LS-W25	24	22.8-25.2	5	50	5	59	SIP

Note:

Models listed with strike-through text have been officially discontinued.

ISOLATION SPECIFICATIONS

Item	Test condition	Min.	Typ.	Max.	Units
Isolation voltage	Tested for 1 minute and 1mA max	1000			VDC
Isolation resistance	Test at 500VDC	1000			MΩ

OUTPUT SPECIFICATIONS

Item	Test Conditions	Min.	Typ.	Max.	Units
Output power				0.25	W
Line regulation	For V_{in} change of $\pm 5\%$			± 0.25	%
Load regulation	10% to 100% load			+1	
Output voltage accuracy	100% full load			± 3	
Temperature drift	100% full load			± 0.03	%/°C
Ripple*	20MHz Bandwidth		10	20	mVp-p
Noise*	20MHz Bandwidth		50	75	
Switching frequency	Full load, nominal input		100		kHz

*Test ripple and noise by "parallel cable" method. See detailed operation instructions at Testing of Power Converter section, application notes.

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Tel: 86-20-38601850

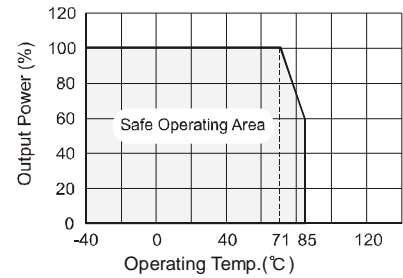
Fax: 86-20-38601272

[Http://www.mornsun-power.com](http://www.mornsun-power.com)

COMMON SPECIFICATIONS

Item	Test condition	Min.	Typ.	Max.	Units
Storage humidity				95	%
Operating temperature		-40		85	°C
Storage temperature		-55		125	
Temp. rise at full load			15	25	
Lead temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			
Short circuit protection		Continuous			
Case material		Plastic(UL94-V0)			
MTBF		3500			k hours
Weight	IB_LS-W25 series		2.1		g
	IB_LD-W25 series		2.4		

TYPICAL TEMPERATURE CURVE



APPLICATION NOTE

1) Requirement on output load

To ensure this module can operate efficiently and reliably, During operation, the minimum output load **could not be less than 10% of the full load**. If the actual output power is very small, please connect a resistor with proper resistance at the output end in parallel to increase the load, or use our company's products with a lower rated output power.

2) Recommended testing and application circuit

If you want to further decrease the input/output ripple, an "LC" filtering network may be connected to the input and output ends of the DC/DC converter, see (Figure 1)

It should also be noted that the inductance and the frequency of the "LC" filtering network should be staggered with the DC/DC frequency to avoid mutual interference. However, the capacitance of the output filter capacitor must be proper. If the capacitance is too big, a startup problem might arise. It's not recommended to connect any external capacitor in the application field.

3) Overload Protection

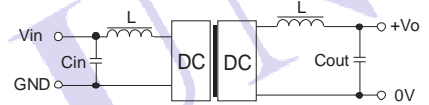
Under normal operating conditions, the output circuit of these products has no protection against over-current. The simplest method is to connect a self-recovery fuse in series at the input end or add a circuit breaker to the circuit.

4) Input Over-voltage Protection Circuit

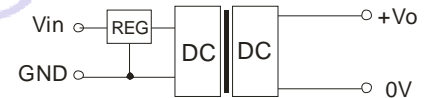
The simplest device for input over-voltage protection is a linear voltage regulator with overheat protection that is connected to the input end in series (Figure 2).

5) No parallel connection or plug and play

RECOMMENDED CIRCUIT



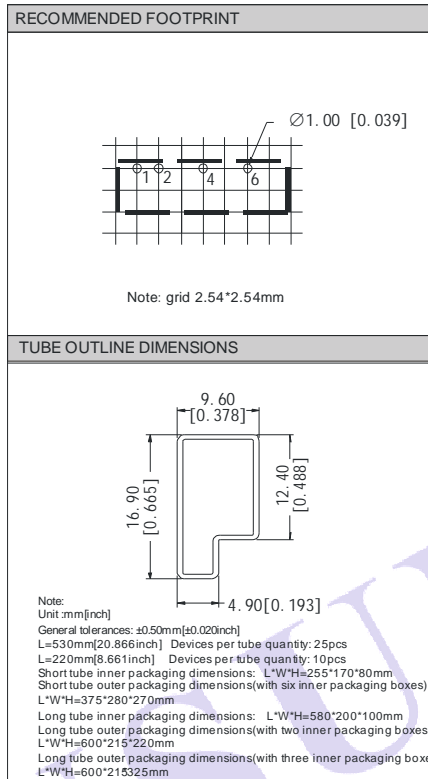
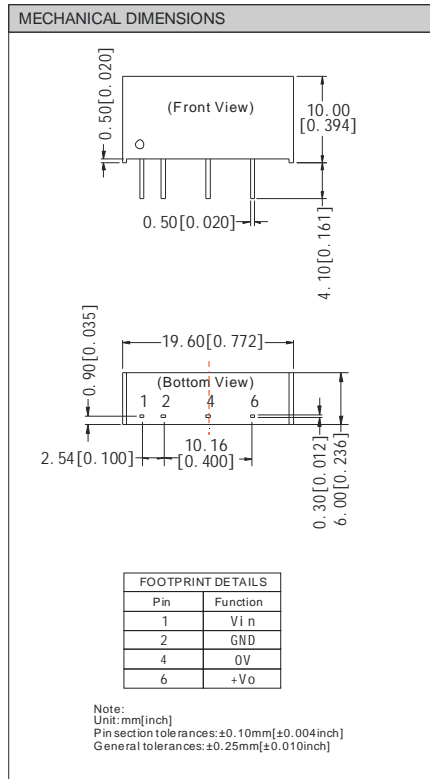
(Figure 1)



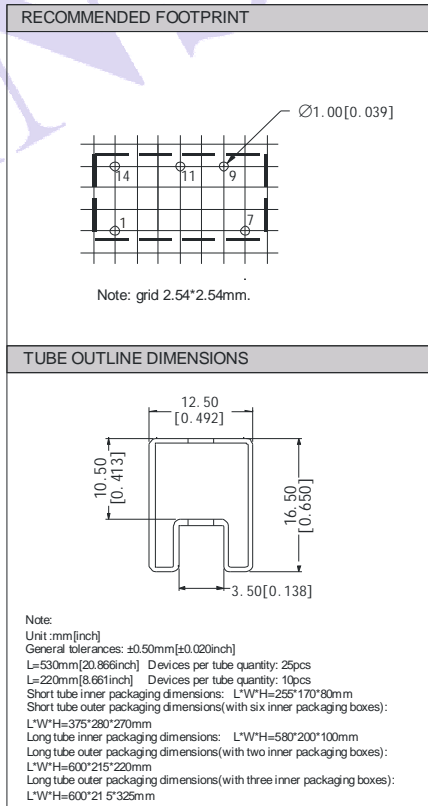
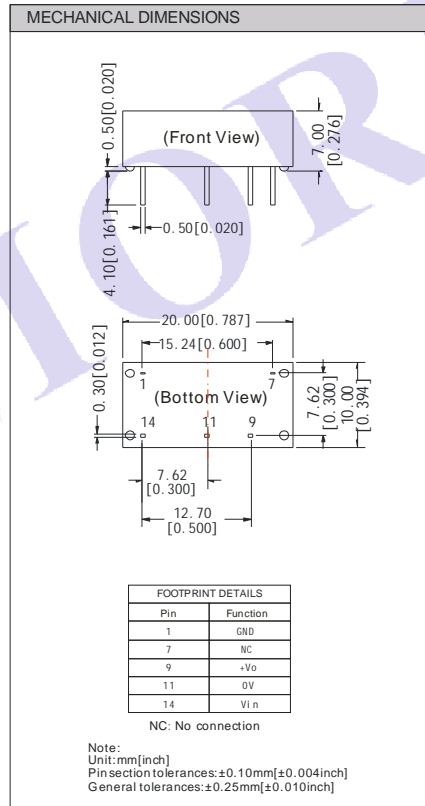
(Figure 2)

OUTLINE DIMENSION & PIN CONNECTIONS

IB_LS-W25



IB_LD-W25



Note:

1. Operation under minimum load will not damage the converter; However, they may not meet all specification listed.
2. All specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
3. Only typical models listed, other models may be different, please contact our technical person for more details.
4. In this datasheet, all the test methods of indications are based on corporate standards.