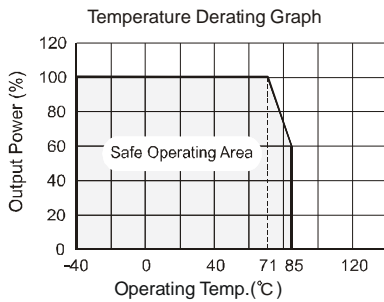




## COMMON SPECIFICATION

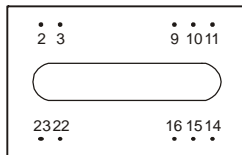
Output Short Circuit Protection	Continuous ,Automatic Recovery
Temperature Rise at Full Load	30°C (typ)
Cooling	Free Air Convection
No-load Power Consumption	200mW (typical)
Operating Temperature Range	-40°C~+85°C
Storage Temperature Range	-50°C ~+125°C
Lead Temperature***	300°C (1.5mm from case for 10 seconds)
Storage Humidity Range	≤ 95%
Case Material	D: Plastic (UL94-V0); MD:Steel,Nickel Coated
MTBF	>1,000,000 hours
Weight	15g
***Lead Temperature 1.5mm from case for 10 seconds.	

## TYPICAL CHARECTERISTICS



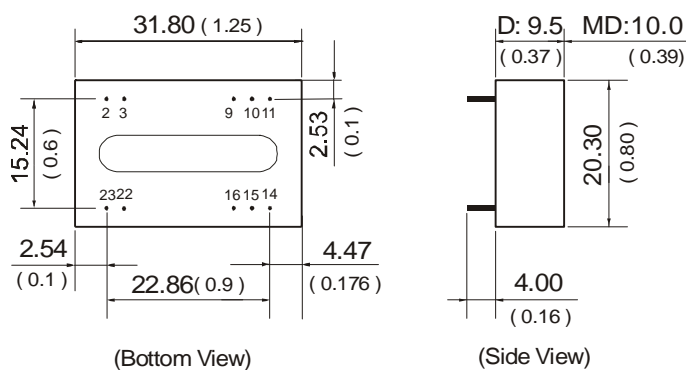
## FOOTPRINT DETAILS

Bottom View



Pin	Function
2,3	GND
9,10,11,15	NC
14	+Vo
16	0V
22,23	Vin

## OUTLINE DIMENSIONS mm(inches)



Note: All Pins on a 2.54mm pitch; Pin diameter:  $\varnothing 0.5 \pm 0.05(0.02) \pm 0.002$ ; Tolerances :  $\pm 0.5(0.02)$ .

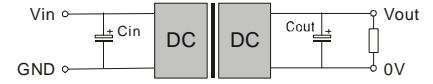
## APPLICATION NOTE

### Requirement on Output Load

To ensure this module operate efficiently and reliably, a minimum load is specified for this kind of DC/DC converter in addition to a maximum load (namely full load). During operation, make sure the specified range of input voltage is not exceeded, the minimum out put load is not less than **10%** Of the full load, If the actual load is less below the specified minimum load. the output ripple of this type of DC/DC converter may increase drastically .If the actual output power from the load in your circuit is very small. please connect a resistor with proper resistance at the output end to in parallel to increase the load, or use our company's other products with a lower rated output power.

### Recommended Circuit

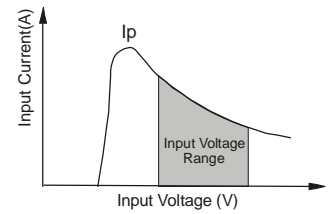
All the PWB\_(M)D-3W Series have been tested according to the following recommended testing circuit before leaving factory. This series should be tested under load(Figure 1). If you want to further decrease the input/output ripple, you can increase capacitance properly or choose capacitors with low ESR. However, the capacitance should not be too high(Table 1). If you want to use the products in high EMI, please choose our metal packaged products.



(Figure 1)

### Input Current

When it is used in unregulated power supply, be sure that the fluctuating range of the power supply and the rippled voltage do not exceed the module standard. Input current of power supply should afford the startup current of this kind of DC/DC module (Figure 2)



(Figure 2)

### External Capacitor

Although this series of DC/DC converter can work without external capacitor, in order to keep an optimum performance, however, it needs external capacitor. (Table 1)

**The products cannot be used in parallel and in plug and play.**

### External Capacitor Table(Table 1)

Vin	Cin	Cout (0+70°C)	Cout (-40+85°C)
5V&12V	100uF	100uF (electrolytic capacitor)	47uF (tantalum capacitor)
24V&48V	10uF		