

## Features

- ★ Continuous Short Circuit Protection
- ★ 14 PIN DIP Package
- ★ In-Out Isolation Voltage 1000 VDC
- ★ MTBF>1million hours(25°C)
- ★ Temperature Range:-40°C to +85°C
- ★ UL94V-0 Inflamming retarding package
- ★ No External Component Required

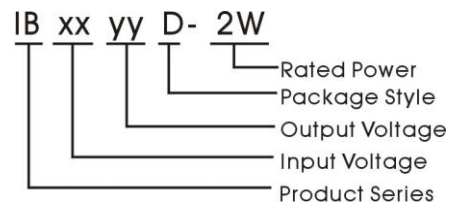


## Applications

The IB\_D-2W 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 where:

- 1) 1000 VDC input and output isolation;
- 2) Input voltage variation  $\leq \pm 5\%$ ;
- 3) Regulated and low ripple noise is not required.



## Model Detail List Specification

Model Number	Input Voltage range (nominal voltage)	Output Voltage	Output Current <sub>(mA)</sub>		Input Current Full load <sub>(mA)</sub>		Efficiency	Max. Capacitive Load( $\mu$ F)
			Min.	Max.	Max.	No.		
IB0505D-2W	4.75~5.25VDC (5 VDC)	5.0V	40	400	555	40	72%	400
IB0509D-2W		9.0V	22	222	547		73%	
IB0512D-2W		12.0V	17	167	541		74%	
IB0515D-2W		15.0V	13	133	532		75%	
IB1205D-2W	11.4~12.6VDC (12 VDC)	5.0V	40	400	228	34	73%	
IB1209D-2W		9.0V	22	222	219		76%	
IB1212D-2W		12.0V	17	167	216		77%	
IB1215D-2W		15.0V	13	133	213		78%	
IB1505D-2W	14.25~15.75V DC (15 VDC)	5.0V	40	400	180	28	74%	
IB1509D-2W		9.0V	22	222	175		76%	
IB1512D-2W		12.0V	17	167	173		77%	
IB1515D-2W		15.0V	13	133	170		78%	
IB2405D-2W	22.8~25.2VDC (24 VDC)	5.0V	40	400	111	22	75%	
IB2409D-2W		9.0V	22	222	108		77%	
IB2412D-2W		12.0V	17	167	107		78%	
IB2415D-2W		15.0V	13	133	105		79%	

## Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power		0.2		2	W
Line Voltage Regulation	For Vin change of $\pm 5\%$			$\pm 0.5$	%
Load regulation	10% to 100% load	5V output	0.01	0.02	
		12V output	0.01	0.02	
		15V output	0.01	0.02	
		24V output	0.01	0.02	
Ripple	20MHz	Output voltage $\leq 12V$		10	mVp-p
Noise	Bandwidth	others		20	
Temperature Drift	100% full load			$\pm 0.03$	%/°C
Short Circuit Protection		Continuous, automatic recovery			
Input Filter		C Filter			

## Environmental Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Storage Humidity	Non condensing			95	%
Temp. rise at full load			40	60	°C
Operating Temperature		-45		+85	
Storage Temperature	Power derating (above 85°C)	-55		+125	
Soldering Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

## Common Specifications

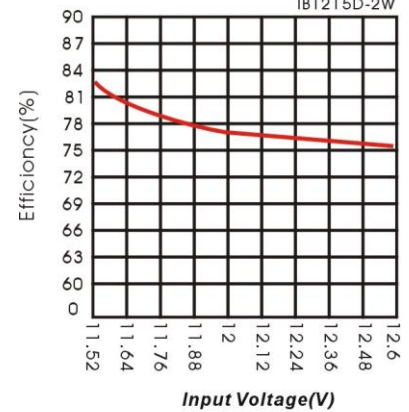
Item	Test Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Tested for 1 minute and leakage current less than 1 mA	1000			VDC
Switching Frequency	Full load, nominal input		100		KHz
MTBF	MIL-HDBK-217F@25°C	1000			K hours
Isolation Resistance	Test at 500VDC	1000			MΩ
Isolation Capacitance			300		PF
Weight			2.5		g

## Input Specifications

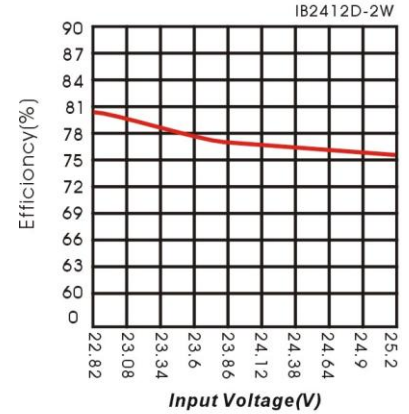
Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	5 VDC Input (4.75~5.25V)			6	VDC
	12 VDC Input (11.4~12.6V)			13	
	15 VDC Input (14.25~15.75V)			18	
	24 VDC Input (22.8~25.2V)			28	
Input surge voltage (1 sec. Max.)	5 VDC Input (4.75~5.25V)			10	VDC
	12 VDC Input (11.4~12.6V)			20	
	15 VDC Input (14.25~15.75V)			28	
	24 VDC Input (22.8~25.2V)			32	

## Product typical Curve

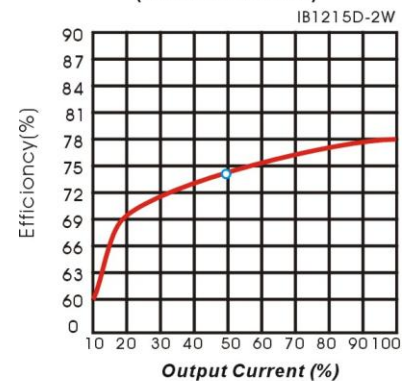
Efficiency VS Input Voltage curve (Full Load)



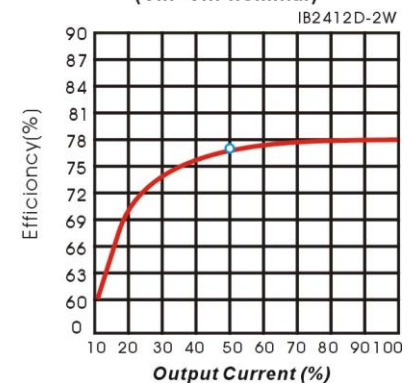
Efficiency VS Output Voltage curve (Vin=Vin-nominal)



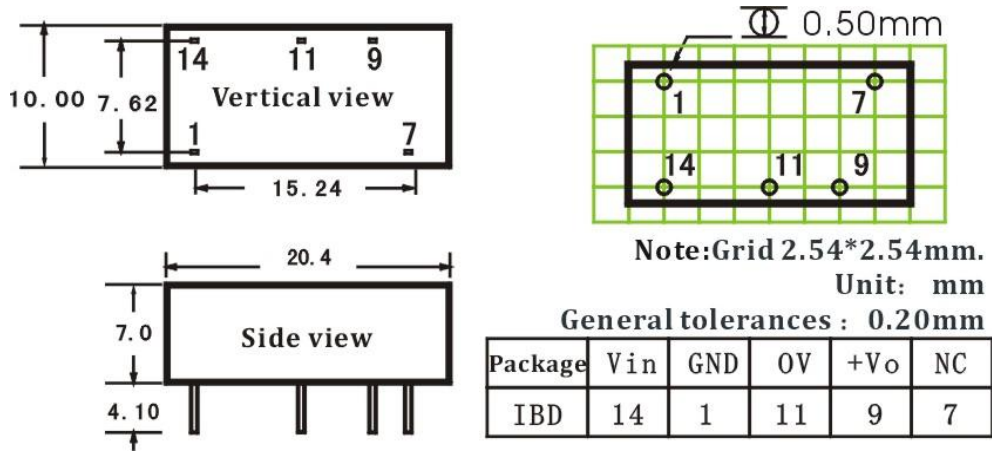
Output Load VS Efficiency curve (Vin=Vin-nominal)



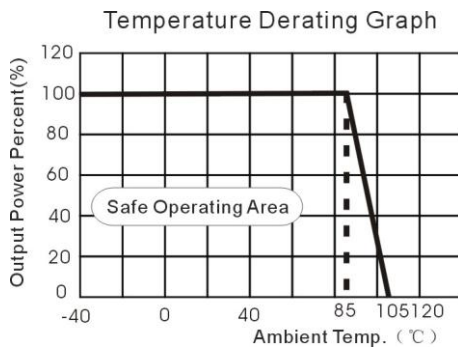
Efficiency VS Output Load curve (Vin=Vin-nominal)



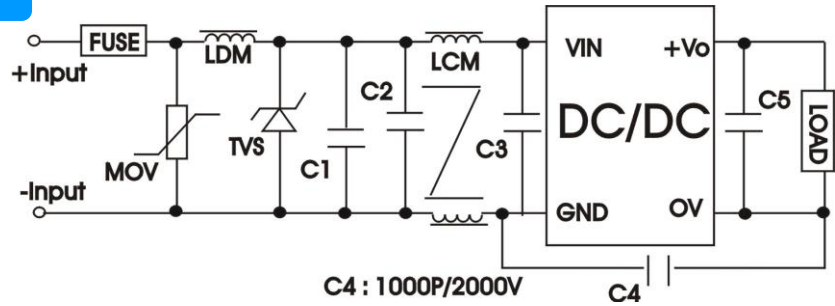
## Mechanical Dimensions & Recommended Footprint



## Temperature Derating Graph



## EMC Recommended Circuit



## EMC Module Application Circuit

