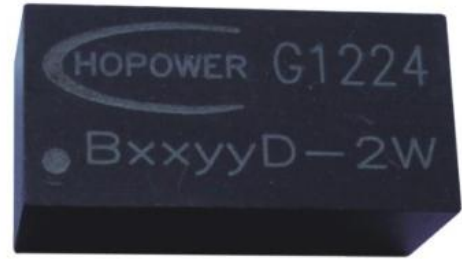


## Features

- ★ Small Footprint
- ★ In-Out Isolation Voltage 1000 VDC
- ★ 14 PIN DIP Package
- ★ Temperature Range:-40℃ to +85℃
- ★ UL94V-0 Inflaming retarding package
- ★ MTBF>1million hours(25℃)



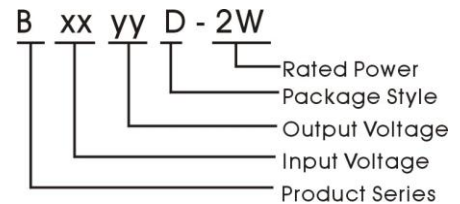
## Applications

The B\_D-2W Series are designed for application where isolated output is required from a distributed power system.

These products apply to where:

- 1) 1000 VDC input and output isolation;
- 2) Input voltage variation  $\leq \pm 10\%$ ;
- 3) Regulated and low ripple noise is not required.

Such as: digital circuits, and IGBT power device driving circuits.



## Model Detail List Specification

Model Number	Input Voltage range (nominal voltage)	Output Voltage	Output Current (mA)		Input Current full load (mA)		Efficiency	Max. Capacitive Load(μF)
			Min.	Max.	Max.	Min.		
B0505D-2W	4.5~5.5VDC (5VDC)	5.0V	40	400	493	40	81%	400
B0509D-2W		9.0V	22	222	481		83%	
B0512D-2W		12.0V	17	167	477		84%	
B0515D-2W		24.0V	13	133	469		85%	
B1205D-2W	10.8~13.2VDC (12VDC)	5.0V	40	400	203	36	82%	
B1209D-2W		9.0V	22	222	200		83%	
B1212D-2W		12.0V	17	167	198		84%	
B1215D-2W		24.0V	13	133	195		85%	
B2405D-2W	21.6~26.4VDC (24VDC)	5.0V	40	400	101	28	82%	
B2409D-2W		9.0V	22	222	99		84%	
B2412D-2W		12.0V	17	167	98		85%	
B2415D-2W		24.0V	13	133	96		86%	

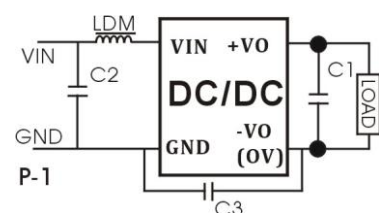
### Recommended Circuit

If the capacitance load is too big, a startup problem might arise. For every channel of output, provided the safe and reliable operation is ensured, there recommend capacitance of its filter capacitor. Refer to recommend see – Model Specification detail list.

### Overload protection

In normal working condition, the product output circuit for overload conditions don't have protection function. The most simple method is in the input end is connected with a resettable fuse, or in the circuit and a circuit breaker.

### Model test circuit



## Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power		0.2		2	W
Line Voltage Regulation	For Vin change of $\pm 1\%$			$\pm 1.5$	%
Load regulation	10% to 100% load	5V output	10	15	
		12V output	8	15	
		15V output	9	15	
		24V output	6	15	
Ripple	20MHz Bandwidth		50		mVp-p
Noise			75		
Temperature Drift	100% full load			$\pm 0.03$	%/ $^{\circ}\text{C}$
Input Filter		C Filter			

## Environmental Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Storage Humidity	Non condensing			95	%
Temp. rise at full load			-25		℃
Operating Temperature		-40		+85	
Storage Temperature	Power derating (above 85℃)	-55		+125	
Cooling		Free air convection			

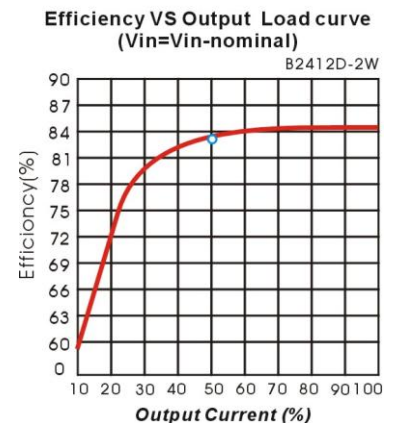
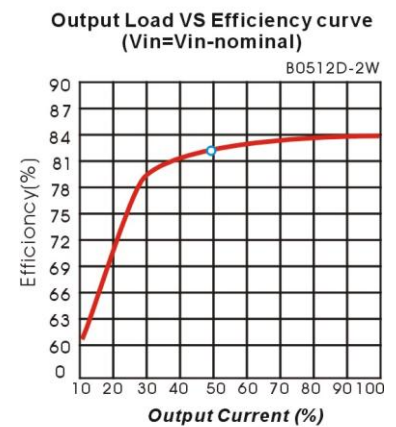
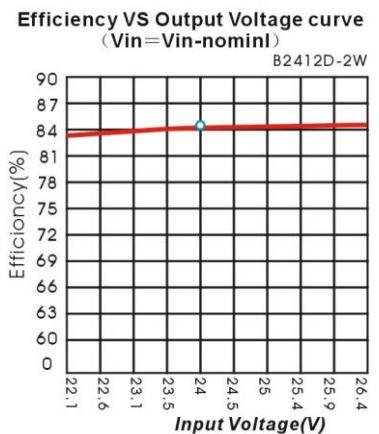
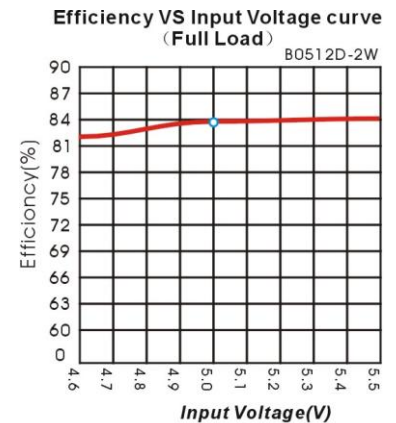
## Common Specifications

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 $^{\circ}\text{C}$	1000			K hours
Isolation Resistance	Test at 500VDC	1000			M $\Omega$
Weight			2.6		g

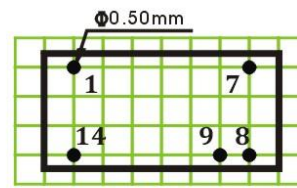
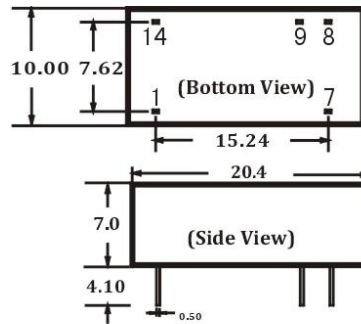
## Input Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	5 VDC Input (4.5~5.5V)			6	VDC
	12 VDC Input (10.8~13.2V)			14.4	
	24 VDC Input (21.6~26.4V)			28.8	
Input surge voltage (1 sec. Max. )	5 VDC Input (4.5~5.5V)	-0.8		10	VDC
	12 VDC Input (10.8~13.2V)	-0.8		20	
	24 VDC Input (21.6~26.4V)	-0.8		32	

## Product typical Curve



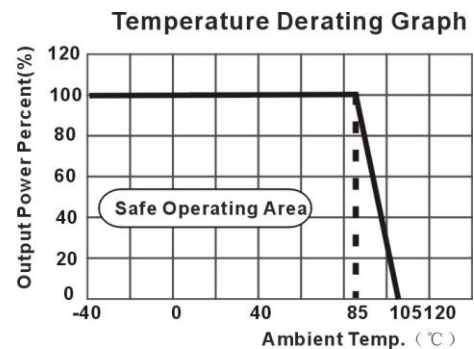
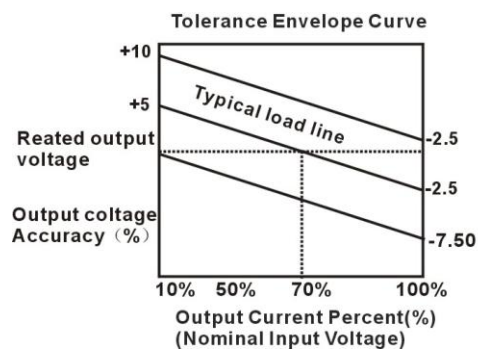
## Mechanical Dimensions & Recommended Footprint



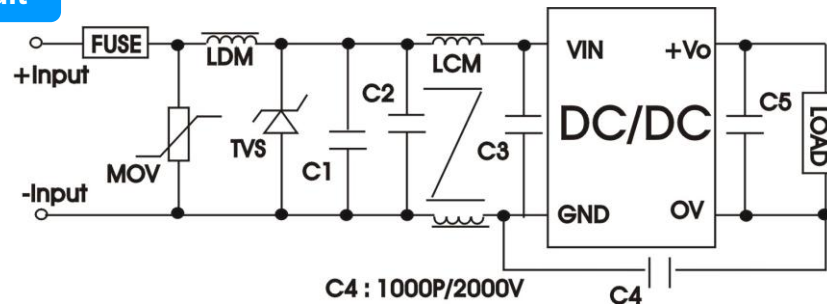
Note: grid 2.54\*2.54mm.  
Unit: mm  
General tolerances : 0.20mm

Package	Vin	GND	OV	+Vo	NC
BD	14	1	8	9	7

## Tolerance Envelope Curve & Temperature Derating Graph



## EMC Recommended Circuit



## EMC Module Application Circuit

