

Features

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



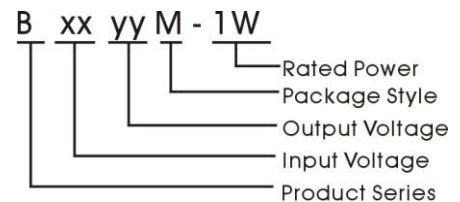
Applications

The B_M-1W 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.		
B0505M-1W	4.5 ~5.5 VDC (5 VDC)	5.0V	20	200	284	40	78%	400
B0509M-1W		9.0V	11	111	277		80%	
B0512M-1W		12.0V	8	83	283		78%	
B0515M-1W		15.0V	6	67	286		78%	
B1205M-1W	10.8~13.2VDC (12 VDC)	5.0V	20	200	115	32	80%	
B1209M-1W		9.0V	11	111	115		80%	
B1212M-1W		12.0V	8	83	116		79%	
B1215M-1W		15.0V	6	67	116		79%	
B2405M-1W	21.6~26.4VDC (24 VDC)	5.0V	20	200	59	26	78%	
B2409M-1W		9.0V	11	111	57		80%	
B2412M-1W		12.0V	8	83	59		78%	
B2415M-1W		15.0V	6	67	59		78%	

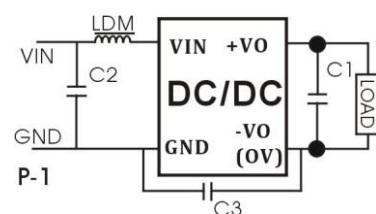
Recommended Circuit

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 without protection function.The simplest method is in the circuit and a circuit breaker

Model test circuit



Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power		0.1		1	W
Line Voltage Regulation	For Vin change of $\pm 1\%$			± 1.5	%
Load regulation	10% to 100% load	5V output	10	15	
		12V output	8	15	
		15V output	6	15	
		24V output	6	15	
Ripple	20MHz	Output voltage $\leq 12V$		50	mVp-p
Noise	Bandwidth	others		75	
Temperature Drift	100% full load			± 0.03	%/°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		°C
Operating Temperature		-40		+85	
Storage Temperature	Power derating (above 85°C)	-55		+125	
Soldering Temperature	1.5mm from case for 10 seconds				
Cooling		Free air convection			

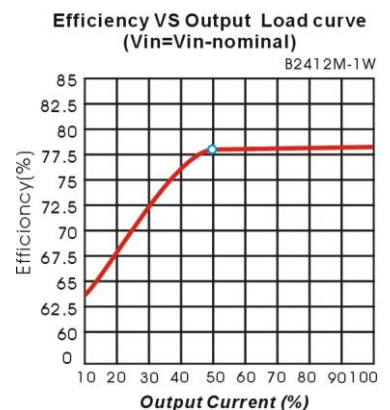
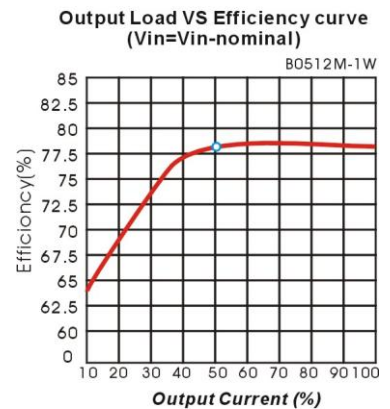
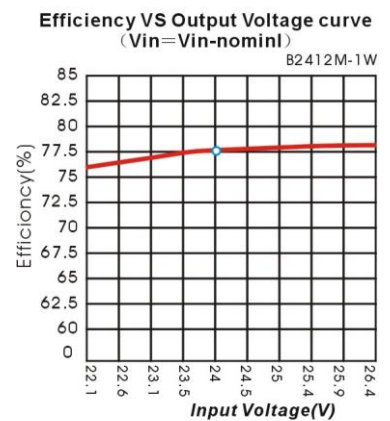
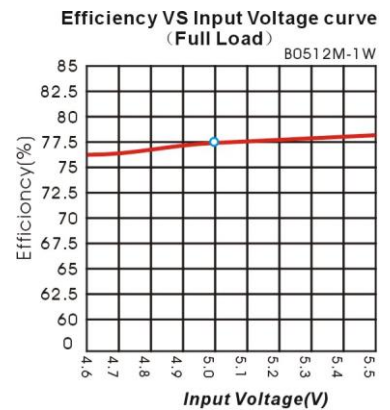
Common Specifications

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
Weight			2.5		g

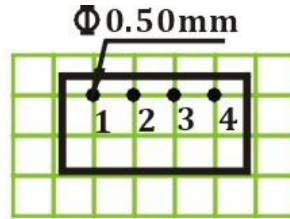
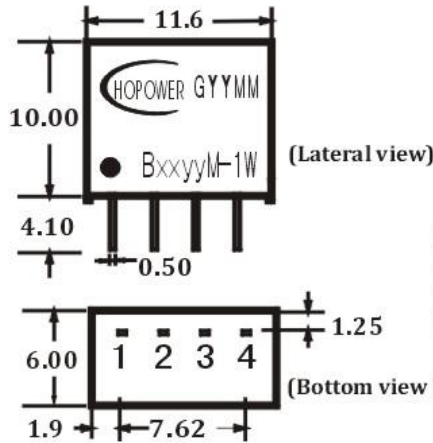
Input Specifications

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	
	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

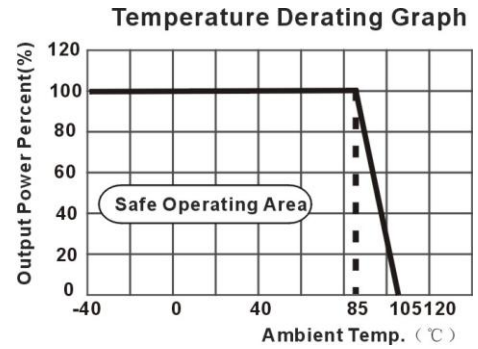
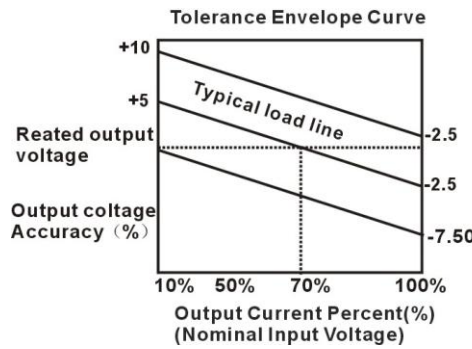


Note: grid 2.54*2.54mm.
Unit: mm

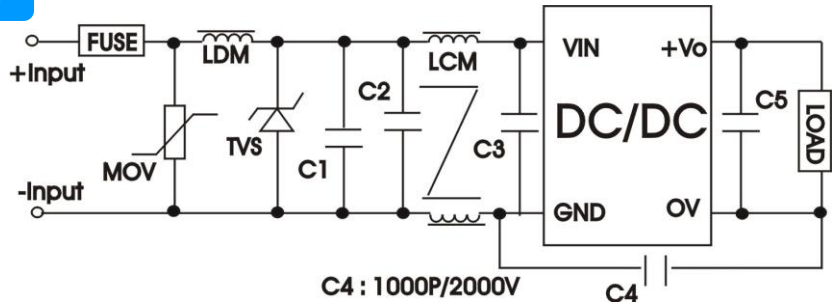
General tolerances : 0.20mm

Package	Vin	GND	OV	+Vo
BM	2	1	3	4

Tolerance Envelope Curve & Temperature Derating Graph



EMC Recommended Circuit



EMC Module Application Circuit

