

Features

- ★ In-Out Isolation Voltage 1000 VDC
- ★ DIP Package
- ★ Temperature Range:-40℃ to +85℃
- ★ UL94V-0 Inflamming retarding package
- ★ MTBF>1million hours(25℃)
- ★ Short Circuit Protection
- ★ Without overshoot when turning On/Off

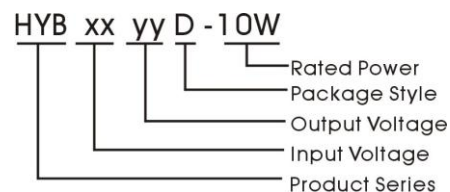


Applications

The HYB_D-10W Series are specially designed for applications where a wide range input voltage power supplies are isolated from the input power supply in a distributed power supply system on a circuit board. For these DC-DC converters, you can reduce the design point of failure and save the development of micro power supply's manpower, material and time costs, also better ensure product quality stability, protect safety and reliability of the end of products. These products apply to where:

1. Input voltage range $\leq 2:1$.
2. Input and output isolation noise is required.
3. Regulated and low ripple noise is required.

Such as: tele-communications etc, industrial control.



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(μ F)
			Min.	Max.	Max.	No.		
HYB1205D-10W	9~18VDC (12 VDC)	5.0V	200	2000	1041	48	80%	2500
HYB1212D-10W		9.0V	83	833	761		82%	
HYB1215D-10W		12.0V	66	667	813		82%	
HYB1224D-10W		15.0V	41	417	628		83%	
HYB2405D-10W	18~36VDC (24 VDC)	5.0V	200	2000	502	36	83%	
HYB2412D-10W		9.0V	83	833	367		85%	
HYB2415D-10W		12.0V	66	667	397		84%	
HYB2424D-10W		15.0V	41	417	306		85%	
HYB4805D-10W	36~72VDC (48 VDC)	5.0V	200	2000	251	28	83%	
HYB4812D-10W		9.0V	83	833	181		86%	
HYB4815D-10W		12.0V	66	667	193		86%	
HYB4824D-10W		15.0V	41	417	151		86%	

Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power		0.5		10	W
Line Regulation	Full load, Input voltage from low to high		±0.2	±0.5	%
Load regulation	5% to 100% load		0.4	0.75	
Voltage Accuracy	No-load output		1.5	5	
Output Voltage Balance	Dual output, balanced loads		0.3	0.5	
Output Accuracy	5% to 100% load		1	3	
Ripple	20MHz Bandwidth		75		mVp-p
Noise			105		
Temperature Drift	100% load		±0.02	±0.03	%/°C
Short Circuit Protection		Continuous, automatic recovery			
Input Filter		C Filter			

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	100 % load, Stand input voltage		200		KHz
MTBF	MIL-HDBK-217F@25°C	1000			K hours
Isolation Resistance	Test at 500VDC	100			MΩ
Isolation Capacitance			300		pF
Weight			4.0		g

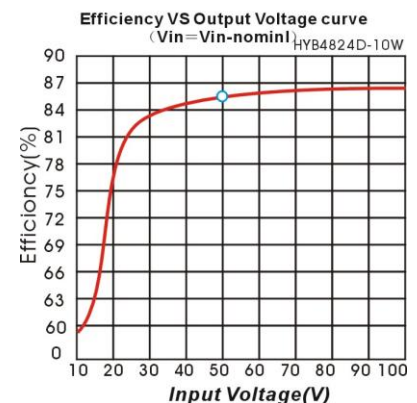
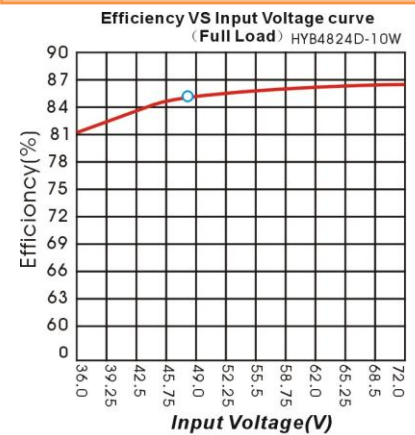
Environmental Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Storage Humidity	Non condensing			95	%
Temp. rise at full load	Ta=25°C		25		°C
Operating Temperature	Power derating (above 85°C)	-40		+85	
Storage Temperature		-55		+125	
Lead Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

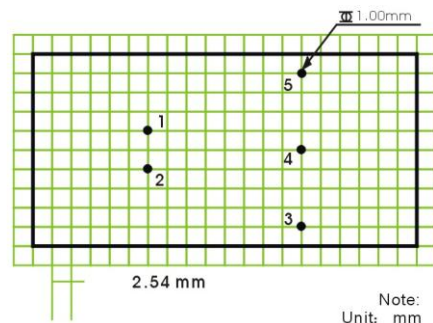
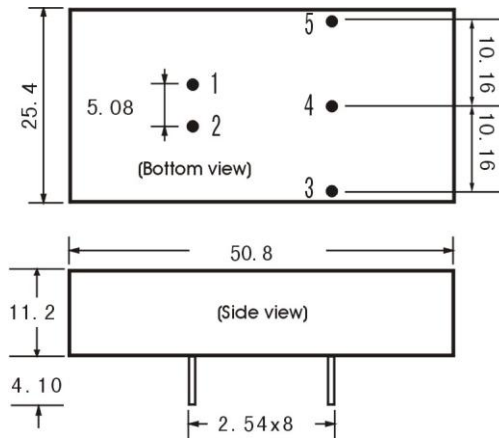
Input Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	12 VDC Input (9~18V)			18	VDC
	24 VDC Input (18~36V)			38	
	48 VDC Input (36~72V)			74	
Input surge voltage (1 sec. Max.)	12 VDC Input (9~18V)			20	
	24 VDC Input (18~36V)			40	
	48 VDC Input (36~72V)			76	

Product typical Curve

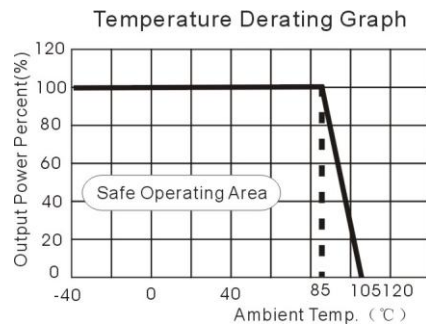


Mechanical Dimensions & Recommended Footprint

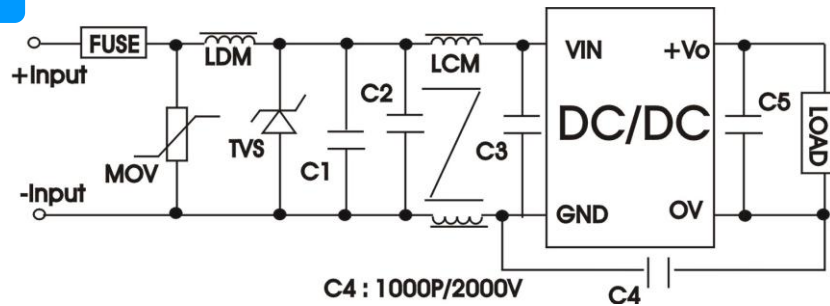


Package	Vin	GND	-Vo	OV	+Vo
HYBD	2	1	5	4	3

Temperature Derating Graph



EMC Recommended Circuit



EMC Module Application Circuit

