

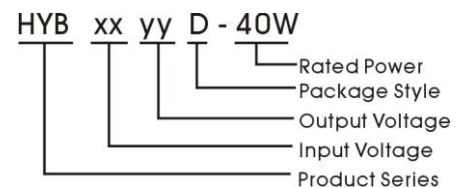
Features

- ★ Isolation Voltage 1000 VDC
- ★ DIP Package
- ★ UL94V-0 Inflaming retarding package
- ★ Temperature Range:-40℃ to +71℃
- ★ MTBF>1million hours(25℃)
- ★ Short-circuit protection
- ★ Output Short Circuit Protection
- ★ Efficiency up to 89%



Applications

The HYB D-40W series offer 25W of output, with 2:1 wide input voltage of 9-18VDC, 18-36VDC, 36-72VDC, 72-144VDC and features 1000VDC isolation and short-circuit. All models are particularly suited to tele -communications, industrial, test equipments power and other fields.



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.	No.		
HYB1205D-40W	9.5~18VDC (12 VDC)	5.0V	800	8000	3921	65	85%	8100
HYB1212D-40W		12.0V	333	3333	3875		86%	
HYB1215D-40W		15.0V	266	2667	3876		86%	
HYB1224D-40W		24.0V	166	1667	3832		87%	
HYB2405D-40W	18~36VDC (24 VDC)	5.0V	800	8000	1937	48	86%	
HYB2412D-40W		12.0V	333	3333	1915		87%	
HYB2415D-40W		15.0V	266	2667	1938		86%	
HYB2424D-40W		24.0V	166	1667	1894		88%	
HYB4805D-40W	36~72VDC (48 VDC)	5.0V	800	8000	968	36	86%	
HYB4812D-40W		12.0V	333	3333	957		87%	
HYB4815D-40W		15.0V	266	2667	957		87%	
HYB4824D-40W		24.0V	166	1667	936		89%	
HYB11005D-40W	72~144VDC (110 VDC)	5.0V	800	8000	422	28	86%	
HYB11012D-40W		12.0V	333	3333	417		87%	
HYB11015D-40W		15.0V	266	2667	413		88%	
HYB11024D-40W		24.0V	166	1667	418		87%	

HYBD-40W Series



Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power				40	W
Output Voltage accuracy			±1	±2	%
Line Regulation	Full load, Input voltage from low to high		±0.2	±0.5	
Load Regulation	10% to 100% load		±0.3	±0.5	
Ripple & Noise	20MHz Bandwidth		75	150	mVp-p
Transient RecoveryTime	Output without external capacitance		100	250	ms
Transient Response Deviation	10%~50%~10% load or 10% ~ 75% ~10% load step change		±2.5	±5	%
Temperature Drift	100% full load		±0.05		%/°C
Short Circuit Protection		Hiccup, Continuous, automatic recovery			
Input Filter		□ Filter			

Environmental Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Storage Humidity	Non condensing	5		95	%
Temp. rise at full load	Operating Temperature			105	°C
Environment Temperature		-40		85	
Storage Temperature		-55		125	
Soldering Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

Common Specifications

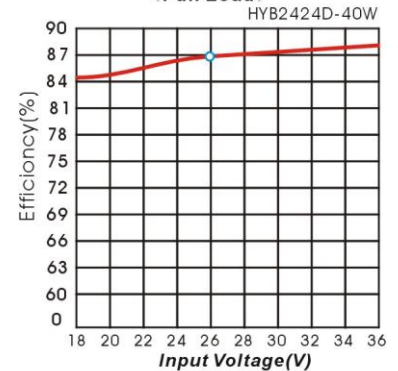
Item	Test Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Tested for 1 minute and leakage current less than 1 mA	1000			VDC
Switching Frequency	Full load, nominal input	250	300	400	KHz
MTBF	MIL-HDBK-217F@25°C	1000			K hours
Isolation Capacitance	Input/Output , 100KHz/1V		1000		PF
Isolation Resistance	Test at 500VDC	1000			MΩ
Weight			50		g

Input Specifications

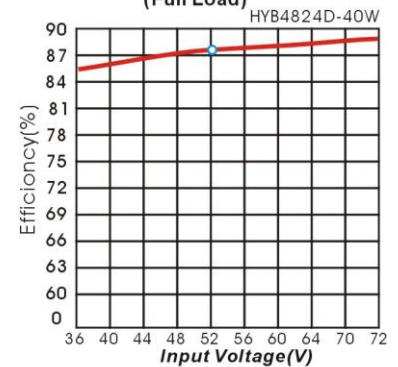
Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	12 VDC Input (9.5~18V)			19	VDC
	24 VDC Input (18~36V)			38	
	48 VDC Input (36~72V)			74	
	110 VDC Input (72~144V)			160	
Input surge voltage (1 sec. Max.)	12 VDC Input (9.5~18V)	9			
	24 VDC Input (18~36V)	18			
	48 VDC Input (36~72V)	36			
	110 VDC Input (72~144V)	72			

Product typical Curve

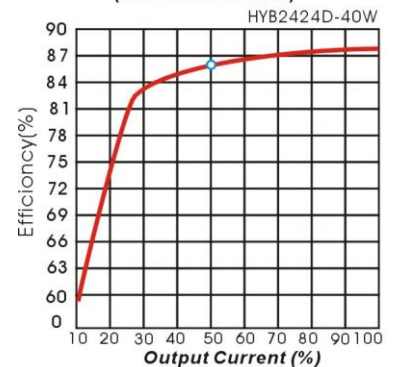
Efficiency VS Input Voltage curve (Full Load)



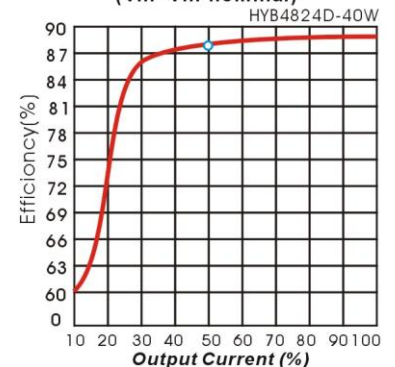
Efficiency VS Input Voltage cure (Full Load)



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



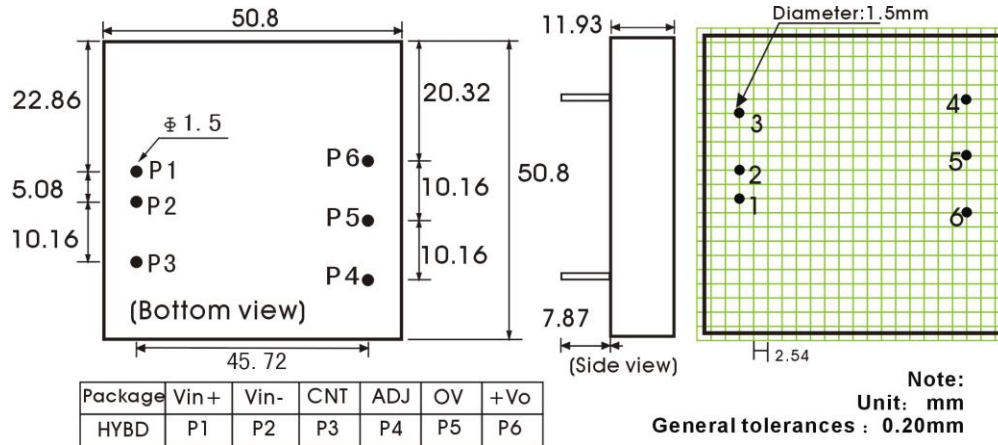
Efficiency VS Output Load curve (Vin=Vin-nominal)



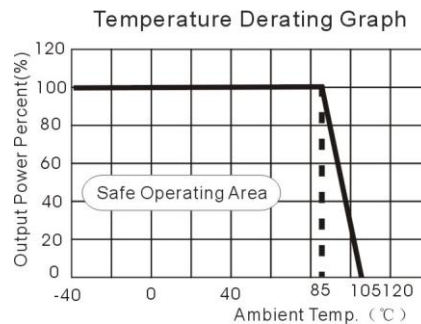
HYBD-40W Series

HOPOWER

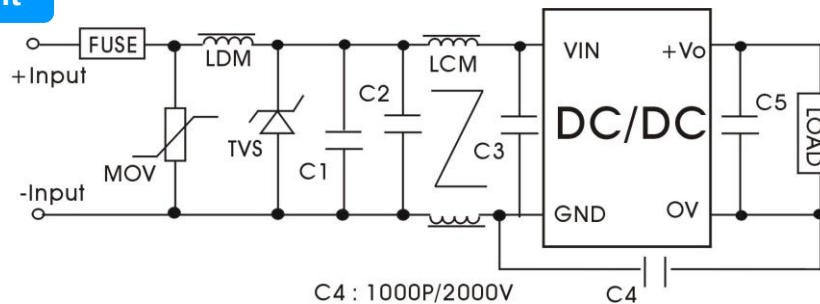
Mechanical Dimensions & Recommended Footprint



Temperature Derating Graph



EMC Recommended Circuit



EMC Module Application Circuit

