

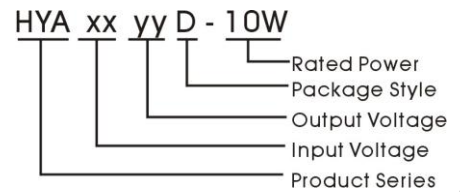
## Features

- ★ Input / output Isolation Voltage 1000 VDC
- ★ DIP Package
- ★ Temperature Range:-40°C to +85°C
- ★ UL94V-0 Inflamming retarding package
- ★ MTBF>1 million hours(25°C)
- ★ Short-circuit protection
- ★ Efficiency up to 86%



## Applications

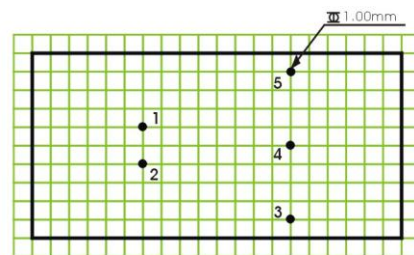
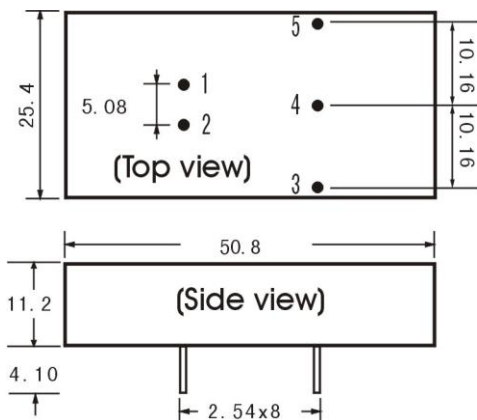
The HYA\_D-10 series offer 10W of output, and features 1000VDC isolation and short-circuit. All models are particularly suited to tele-communications, industrial, test equipments power and other fields.



## 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.		
HYA1205D-10W	9~18VDC (12 VDC)	±5.0V	±100	±1000	520		80%	1200
HYA1212D-10W		±12.0V	±41	±417	508		82%	
HYA1215D-10W		±15.0V	±33	±334	509		82%	
HYA1224D-10W		±24.0V	±21	±209	503		83%	
HYA2405D-10W	18~36VDC (24 VDC)	±5.0V	±100	±1000	251		83%	
HYA2412D-10W		±12.0V	±41	±417	245		85%	
HYA2415D-10W		±15.0V	±33	±334	248		84%	
HYA2424D-10W		±24.0V	±21	±209	245		85%	
HYA4805D-10W	36~72VDC (48 VDC)	±5.0V	±100	±1000	125		83%	
HYA4812D-10W		±12.0V	±41	±417	121		86%	
HYA4815D-10W		±15.0V	±33	±334	121		86%	
HYA4824D-10W		±24.0V	±21	±209	121		86%	

## Mechanical Dimensions & Recommended Footprint



Note:  
Unit: mm  
General tolerances : 0.20mm

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

## Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power		0.5		10	W
Output Voltage accuracy	0% to 100% load			±2	%
Line Regulation	Full load, Input voltage from low to high		±0.2	±0.5	
Load regulation	5% to 100% load		±0.3	±0.5	
Ripple & Noise	20MHz Bandwidth		75	105	mVp-p
Transient Recovery Time	25% load step change		0.5	2	ms
Transient Response Deviation			±2	±5	%
Temperature Drift	100% full load		±0.02	±0.03	%/°C
Short Circuit Protection		Hiccup, Continuous, automatic recovery			
Input Filter		□ 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	Temperature ≥85°C derating	-55		+125	
Soldering Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

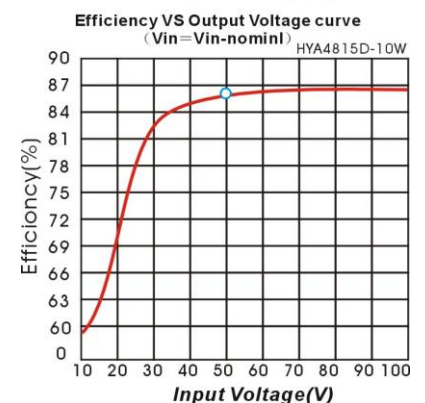
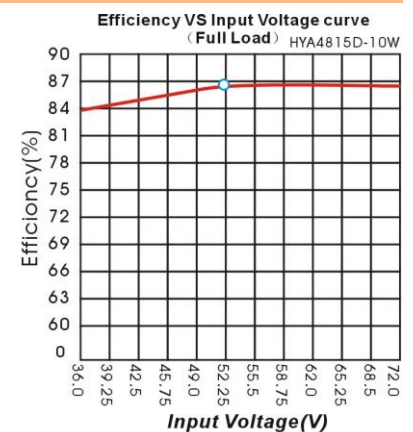
## Common Specifications

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	150	200	300	KHz
MTBF	MIL-HDBK-217F@25°C	1000			K hours
Isolation Capacitance	Input/Output, 100KHz/1V		1200		PF
Isolation Resistance	Test at 500VDC	1000			MΩ
Weight			20		g

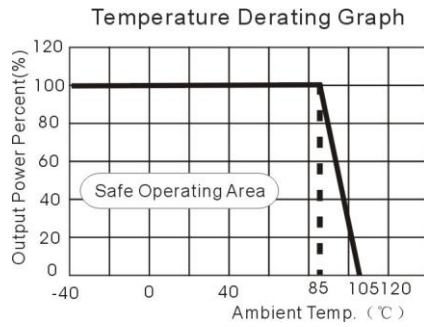
## Input Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	12 VDC Input (9~18V)			20	VDC
	24 VDC Input (18~36V)			40	
	48 VDC Input (36~72V)			80	
Input surge voltage (1 sec. Max.)	12 VDC Input (9~18V)			25	
	24 VDC Input (18~36V)			50	
	48 VDC Input (36~72V)			100	

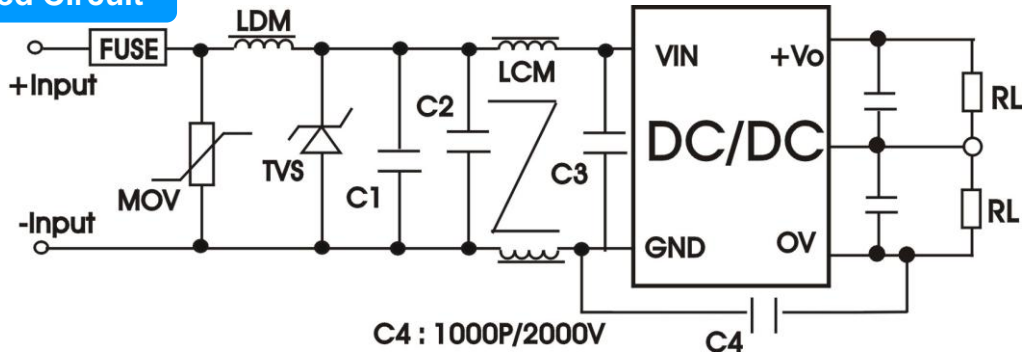
## Product typical Curve



## Temperature Derating Graph



## EMC Recommended Circuit



## EMC Module Application Circuit

