

Features

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

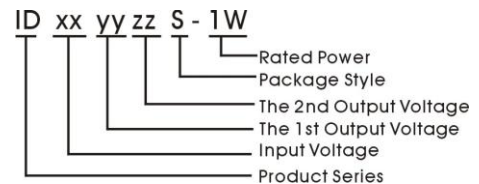


Applications

The ID_S-1W Series are specially designed for applications where a group of polar power supplies are isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to where:

- 1) 1000 VDC input and output isolation;
- 2) Input voltage variation $\leq \pm 5\%$;
- 3) Regulated and low ripple noise is not required.



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.		
ID050505S-1W	4.75~5.25VDC (5 VDC)	5.0V;5.0V	10;10	100;100	136	28	73%	100 μ F
ID050909S-1W		9.0V;9.0V	5;5	56;56	132		76%	
ID051212S-1W		12.0V;12.0V	4;4	42;42	130		77%	
ID051515S-1W		15.0V;15.0V	3;3	33;33	126		78%	
ID120505S-1W	11.4~12.6VDC (12 VDC)	5.0V;5.0V	10;10	100;100	57	24	72%	
ID120909S-1W		9.0V;9.0V	5;5	56;56	53		78%	
ID121212S-1W		12.0V;12.0V	4;4	42;42	53		78%	
ID121515S-1W		15.0V;15.0V	3;3	33;33	51		80%	
ID240505S-1W	22.8~25.2VDC (24 VDC)	5.0V;5.0V	10;10	100;100	28	16	72%	
ID240909S-1W		9.0V;9.0V	5;5	56;56	27		77%	
ID241212S-1W		12.0V;12.0V	4;4	42;42	27		76%	
ID241515S-1W		15.0V;15.0V	3;3	33;33	27		76%	

Input Over-voltage Protection Circuit

The simplest device for input over-voltage protection is a linear voltage regulator with overheat protection that is connected to the input end in series.

When the environment temperature is higher than 85°C, the product output power should be less than 60% of the rated power. No parallel connection or plug and play.

Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Output Power		0.1		1	W
Line Voltage Regulation	For Vin change of $\pm 1\%$			± 0.25	%
Load regulation	10% to 100% load		0.01	0.02	
Ripple	20MHz	Output voltage $\leq 12V$		10	mVp-p
Noise	Bandwidth	others		20	
Temperature Drift	100% full load			± 0.03	$\%/^{\circ}C$
Input Filter		C Filter			

Environmental Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Storage Humidity	Non condensing			95	%
Temp. rise at full load			20	40	$^{\circ}C$
Operating Temperature		-40		+85	
Storage Temperature	Power derating (above $85^{\circ}C$)	-55		+125	
Soldering Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

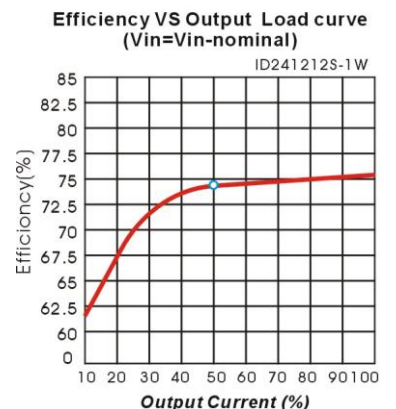
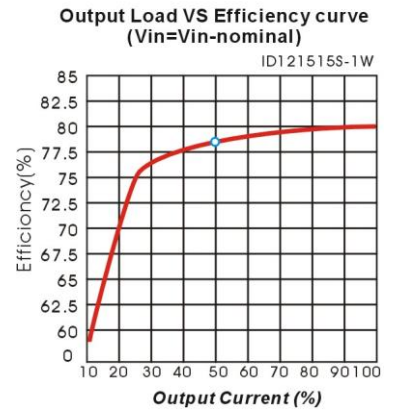
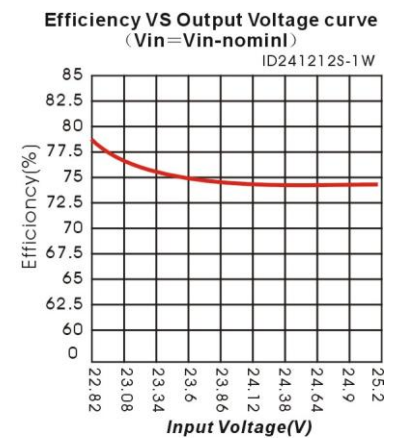
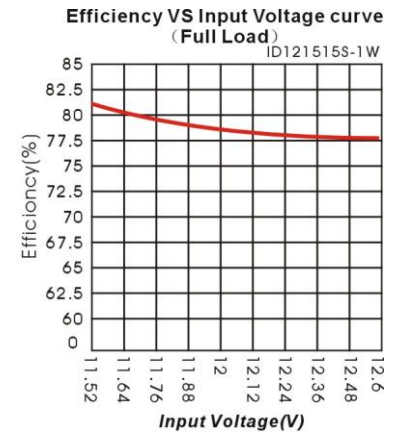
Common Specifications

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		100		KHz
MTBF	MIL-HDBK-217F@ $25^{\circ}C$	1000			K hours
Isolation Resistance	Test at 500VDC	1000			M Ω
Isolation Capacitance			350		PF
Weight			3.5		g

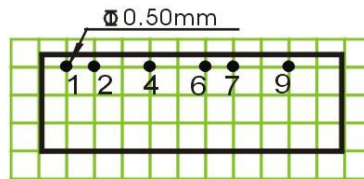
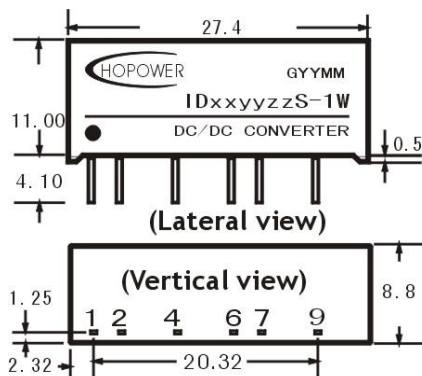
Input Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Max. voltage	5 VDC Input (4.75~5.25V)			6	VDC
	12 VDC Input (11.4~12.6V)			14	
	24 VDC Input (22.8~25.2V)			28	
Input surge voltage (1 sec. Max.)	5 VDC Input (4.75~5.25V)			9	
	12 VDC Input (11.4~12.6V)			18	
	24 VDC Input (22.8~25.2V)			30	

Product typical Curve



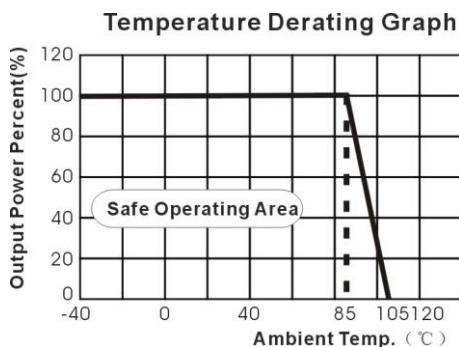
Mechanical Dimensions & Recommended Footprint



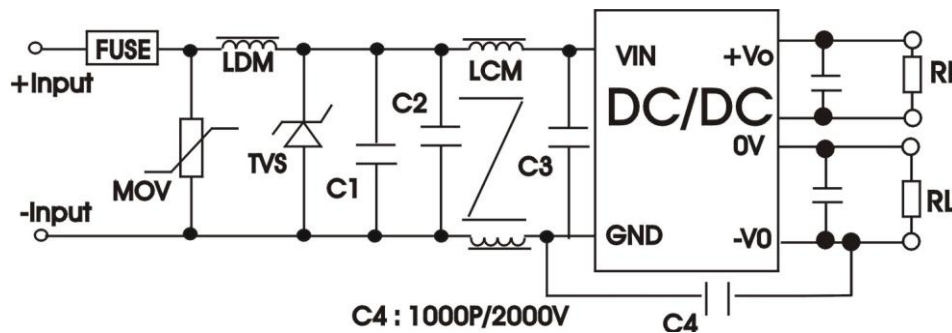
Note: Grid 2.54*2.54mm.
Unit: mm
General tolerances : 0.20mm

Package	Vin	GND	Ov1	+Vo1	Ov2	+Vo2
IDS	1	2	4	6	7	9

Temperature Derating Graph



EMC Recommended Circuit



EMC Module Application Circuit

