IDXS-2W Series

HOPOWER

Features

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

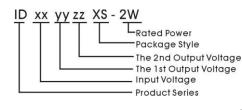


Applications

The ID_XS-2W 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

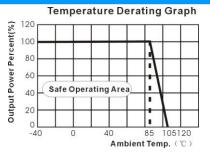
Input Voltage range	Output	Output Current (mA)		Input Current Full load.(mA)		Efficiency	Max. Capacitive
(nominal voltage)	voltage	Min. M	Max.	Max.	No.		Load(µF)
	5.0V;5.0V	20;20	200;200	294		73%	
4.75~5.25VDC	9.0V;9.0V	11;11	111;111	293	20	76%	
(5 VDC)	12.0V;12.0V	8;8	83;83	276	30	77%	
	15.0V;15.0V	6;6	67;67	287		78%	
	5.0V;5.0V	20;20	200;200	122		72%	
11.4~12.6VDC	9.0V;9.0V	11;11	111;111	118	26	78%	200
(12 VDC)	12.0V;12.0V	8;8	83;83	115	26	78%	200
	15.0V;15.0V	6;6	67;67	111		80%	
	5.0V;5.0V	20;20	200;200	61		72%	
22.8~25.2VDC	9.0V;9.0V	11;11	111;111	59	20	77%	
(24 VDC)	12.0V;12.0V	8;8	83;83	55	20	76%	
	15.0V;15.0V	6;6	67;67	53		76%	
	range (nominal voltage) 4.75~5.25VDC (5 VDC) 11.4~12.6VDC (12 VDC) 22.8~25.2VDC	range (nominal voltage) Output Voltage 4.75~5.25VDC 9.0V;5.0V 4.75~5.25VDC 9.0V;9.0V (5 VDC) 12.0V;12.0V 15.0V;15.0V 15.0V;5.0V 11.4~12.6VDC 9.0V;9.0V (12 VDC) 15.0V;15.0V 22.8~25.2VDC 9.0V;9.0V (24 VDC) 12.0V;12.0V	Contput Output Output Voltage Min. 4.75~5.25VDC 9.0V;9.0V 11;11 (5 VDC) 12.0V;12.0V 8;8 15.0V;5.0V 20;20 11.4~12.6VDC 9.0V;9.0V 11;11 (12 VDC) 5.0V;5.0V 20;20 11.4~12.6VDC 9.0V;9.0V 11;11 (12 VDC) 15.0V;15.0V 6;6 15.0V;15.0V 6;6 5.0V;5.0V 22.8~25.2VDC 9.0V;9.0V 11;11 (24 VDC) 12.0V;12.0V 8;8	Output voltage Output voltage Output voltage Output voltage 4.75~5.25VDC 5.0V;5.0V 20;20 200;200 9.0V;9.0V 11;11 111;111 (5 VDC) 9.0V;9.0V 11;11 111;11 (5 VDC) 15.0V;15.0V 8;8 83;83 15.0V;15.0V 6;6 67;67 11.4~12.6VDC 9.0V;9.0V 11;11 111;111 (12 VDC) 12.0V;12.0V 8;8 83;83 15.0V;5.0V 20;20 200;200 9.0V;9.0V 11;11 111;111 12.0V;12.0V 8;8 83;83 15.0V;5.0V 20;20 200;200 22.8~25.2VDC 9.0V;9.0V 11;11 111;111 (24 VDC) 12.0V;12.0V 8;8 83;83	Contput voltageOutput voltageOutput voltageOutput Fullo(nominal voltage) $5.0V;5.0V$ $20;20$ $200;200$ 294 $4.75^{\sim}5.25VDC$ $9.0V;9.0V$ $11;11$ $111;111$ 293 $(5 VDC)$ $12.0V;12.0V$ $8;8$ $83;83$ 276 $15.0V;15.0V$ $6;6$ $67;67$ 287 $11.4^{\sim}12.6VDC$ $9.0V;9.0V$ $11;11$ $111;111$ 118 $(12 VDC)$ $9.0V;9.0V$ $11;11$ $111;111$ 118 $12.0V;12.0V$ $8;8$ $83;83$ 115 $15.0V;15.0V$ $6;6$ $67;67$ 111 $22.8^{\sim}25.2VDC$ $9.0V;9.0V$ $11;11$ $111;111$ 59 $(24 VDC)$ $12.0V;12.0V$ $8;8$ $83;83$ 55	$ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c } \hline \begin{tabual}{ c c c } \hline \begin{tabual}{ c c c } \hline \begin{tabual}{ c c } \hline \hline \begin{tabual}{ c c } \hline \hline \begin{tabual}{ c c }$	Voltage (nominal voltage)Output VoltageOutput Current (mA)Full $\log d_{(mA)}$ Efficiency(nominal voltage)Min.Max.Max.No.73%4.75~5.25VDC (5 VDC)5.0V;5.0V20;20200;2002949.0V;9.0V11;11111;11129376%12.0V;12.0V8;883;8327677%15.0V;15.0V6;667;6728778%11.4~12.6VDC (12 VDC)9.0V;9.0V11;11111;11111812.0V;12.0V8;883;8311578%15.0V;15.0V6;667;6711178%15.0V;15.0V6;667;6711178%15.0V;15.0V20;20200;2006122.8~25.2VDC (24 VDC)9.0V;9.0V11;11111;1115972%12.0V;12.0V8;883;835577%

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 then 60% of the rated power. No parallel connection or plug and play.

Temperature Derating Graph



IDXS-2W Series

Output Specifications

ltem	Test Conditions	Min.	Тур.	Max.	Unit	
Output Power		0.2		2	w	
Line Voltage Regulation	For Vin change of ±1%			±0.25	0/	
Load regulation	10% to 100% load		0.01	0.02	%	
Ripple			10			
Noise	20MHz Bandwidth		20		mVp-p	
Temperature Drift	100% full load			±0.03	%/°C	
Input Filter	C Filter					

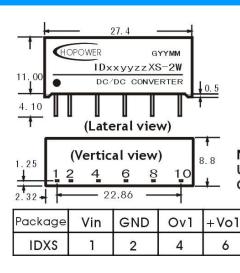
Environmental Specifications

Item	Test Conditions	Min.	Тур.	Max.	Unit
Storage Humidity	Non condensing			95	%
Temp. rise at full load			25	50	
Operating Temperature		-40		+85	ŝ
Storage Temperature	Power derating (above 85℃)	-55		+125	ĉ
Soldering Temperature	1.5mm from case for 10 seconds			300	
Cooling		Free air convection			

Common Specifications

ltem	Test Conditions	Min.	Тур.	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
Isolation Capacitance			350		PF
Weight			3.5		g

Mechanical Dimensions & Recommended Footprint



12	4	6	810	

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

+Vo2

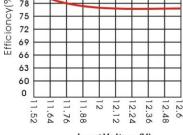
10

Ov2

8

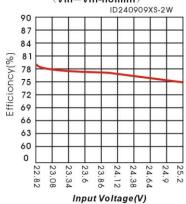
	(81 % 78	
mVp-p	> 75	

90 87 84



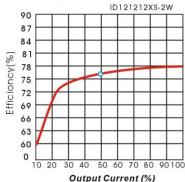
Input Voltage(V)

Efficiency VS Output Voltage curve (Vin=Vin-nominI)

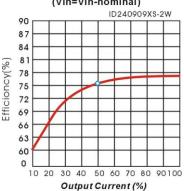


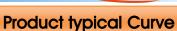
Output Load VS Efficiency curve

(Vin=Vin-nominal)



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





Efficiency VS Input Voltage curve

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(Full Load) ID121212XS-2W

IDXS-2W Series



EMC Recommended Circuit

