

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)

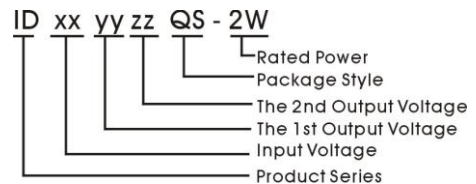


Applications

The ID_QS-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

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.		
ID050505QS-2W	4.75~5.25VDC (5 VDC)	5.0V;5.0V	20;20	200;200	294	30	68%	200
ID050909QS-2W		9.0V;9.0V	11;11	111;111	293		68%	
ID051212QS-2W		12.0V;12.0V	8;8	83;83	276		72%	
ID051515QS-2W		15.0V;15.0V	6;6	67;67	287		70%	
ID120505QS-2W	11.4~12.6VDC (12 VDC)	5.0V;5.0V	20;20	200;200	122	26	68%	
ID120909QS-2W		9.0V;9.0V	11;11	111;111	118		70%	
ID121212QS-2W		12.0V;12.0V	8;8	83;83	115		72%	
ID121515QS-2W		15.0V;15.0V	6;6	67;67	111		75%	
ID240505QS-2W	22.8~25.2VDC (24 VDC)	5.0V;5.0V	20;20	200;200	61	20	68%	
ID240909QS-2W		9.0V;9.0V	11;11	111;111	59		70%	
ID241212QS-2W		12.0V;12.0V	8;8	83;83	55		75%	
ID241515QS-2W		15.0V;15.0V	6;6	67;67	53		78%	

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		0.2		2	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			25		$^{\circ}C$
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			

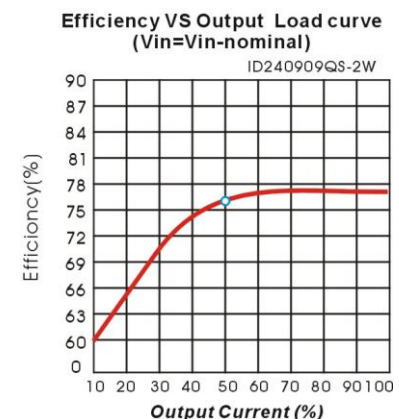
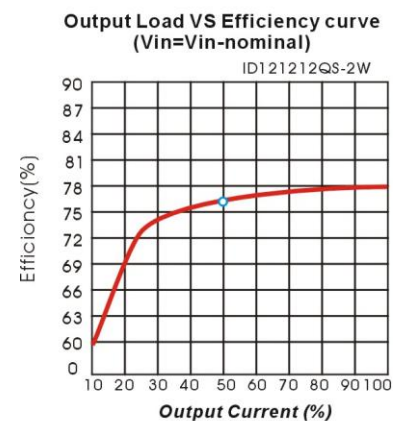
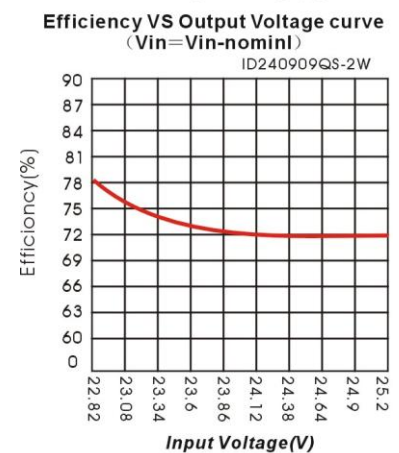
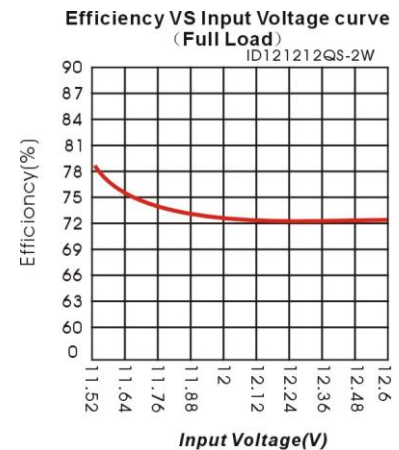
Common Specifications

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

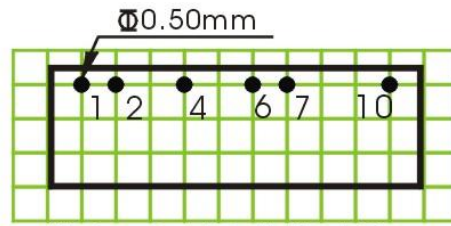
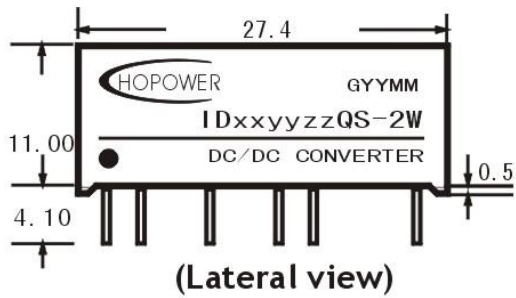
Input Specifications

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	VDC
	12 VDC Input (11.4~12.6V)			18	
	24 VDC Input (22.8~25.2V)			30	

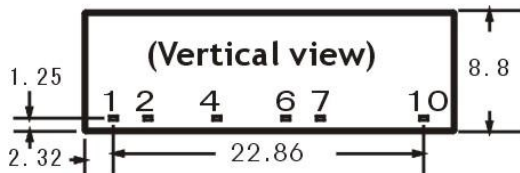
Product typical Curve



Mechanical Dimensions & Recommended Footprint

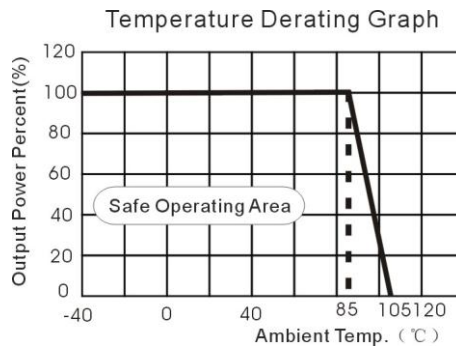


Note: Grid 2.54*2.54mm.
Unit: mm
General tolerances : 0.20mm

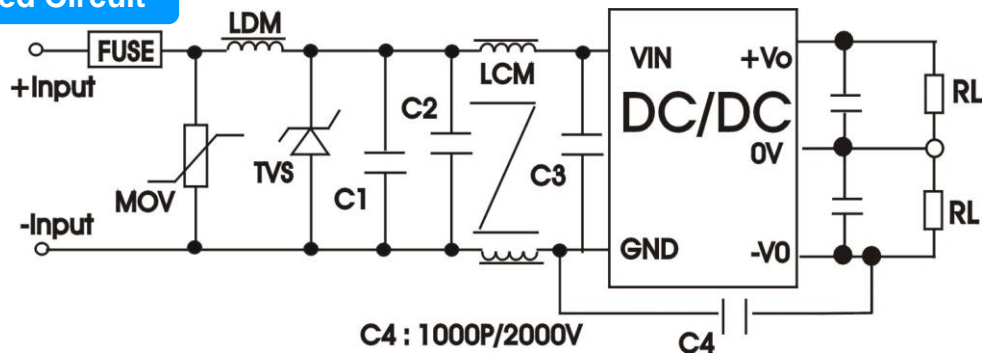


Package	Vin	GND	Ov1	+Vo1	Ov2	+Vo2
IDQS	1	2	4	6	7	10

Temperature Derating Graph



EMC Recommended Circuit



EMC Module Application Circuit

