DESCRIPTION

The AD-IBxxxxS-2WR3 series are specially designed for applications where a single power supply is highly isolated from the input power supply in a distributed power supply system on a circuit board.

There products apply to:

1) Where the voltage of the input power supply is fixed (voltage variation ≤±5%)
2) Where isolation is necessary between input and output (isolation voltage ≤±1000VDC)
3) Where the regulation of the output voltage and the output ripple and noise are demanded

FEATURES

- Compact size
- SIP package
- I/O Isolation test voltage 1500VDC
- -40°C to +85°C Working Temperature Range
- Excellent thermal characteristic
- Low static current and high conversion efficiency
- Low ripple coefficient and low noise
- Built in soft start technology
- Short Circuit Protection
- Internal surface mounted design
- Industry standard pin-out
- No external components required.

ORDERING INFORMATION

Part Number	Input		Output	
	Nominal Voltage	Range Voltage	Voltage (VDC)	Current (mA)
AD-IB0505S-2WR3	5V	4.75V~5.25V	5	400
AD-IB0512S-2WR3			12	166
AD-IB1205S-2WR3	12V	11.4V~12.6V	5	400
AD-IB1212S-2WR3			12	166
AD-IB1215S-2WR3			15	133
AD-IB2405S-2WR3	24V	22.8V~25.2V	5	400

ISOLATION SPECIFICATIONS

Item	Test Condition	Min	Typ	Max	Unit
Isolation Voltage	Tested for 1minutest and 1mA max	1500			VDC
Isolation Resistance	Test at 500VDC	1000			MΩ
Isolation Capacitance			40		pF

OUTPUT SPECIFICATIONS

Item	Test Condition	Min	Typ	Max	Unit
Storage Humidity		5		95	%RH
Operating Temperature		-40		85	°C
Storage Temperature		-40		125	°C
Temp. Rise at Full Load					
Lead Temperature	1.5mm from case for 10 seconds				
Short Circuit Protection		Continuous, Automatic Recover			
Cooling		Free air convection			
Case Material		Plastic (UL94-V0)			
MTBF		3500			K Hours

GENERAL SPECIFICATIONS

T_A =25°C, Humidity <75%, nominal input volage and rated output load, unless otherwise specified.

Item	Test Condition	Min	Typ	Max	Unit
Output Power				2	W
Line Regulation	For Vin Change of 5%			±0.5	%
Load Regulation	10% to 100% Load	±1		±2	%
Output Voltage Accuracy	100% Full Load			±3	%
Temperature Drift	100% Full Load			0.03	%/°C
Ripple & Noise	20MHz Bandwidth	30			mVp-p

TYPICAL CHARACTERISTIC CURVES

Fig1.Output Regulation Curve

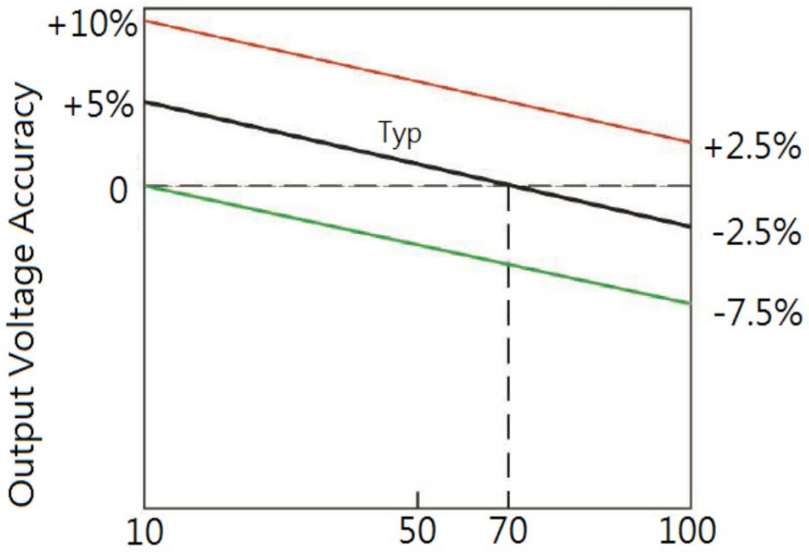
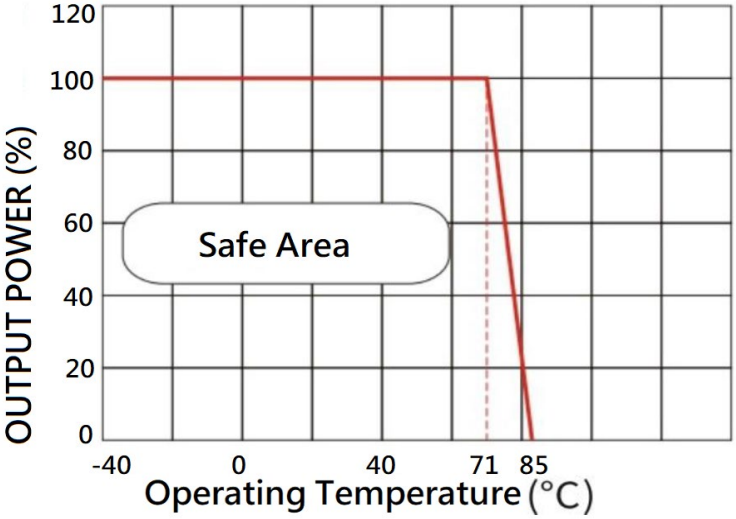


Fig2. Temperature Derating

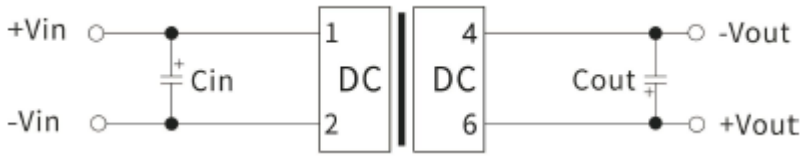


DESIGN REFERENCE

Typical Application

Input and/or output ripple can be further reduced, by connecting a filter capacitor from the input and/or output terminals to ground as shown in Fig3.

Fig3.



Choosing suitable filter capacitor values is very important for a smooth operation of the modules, particularly to avoid start-up problems caused by capacitor values that are too high.
For recommended input and output capacitor values refer to Table 1.

Vin (VDC)	Cin (uF)	Vo (VDC)	Cout (uF)
3.3	10uF/16V	3.3	10uF/16V
5	10uF/16V	5	10uF/16V
9	4.7uF/25V	9	4.7uF/25V
12	4.7uF/25V	9	4.7uF/25V
15	2.2uF/25V	12	1uF/50V
24	2.2uF/25V	12	1uF/50V

Table1. Recommend Input and output Capacitor Values

EMI Compliance Circuit

Fig4.

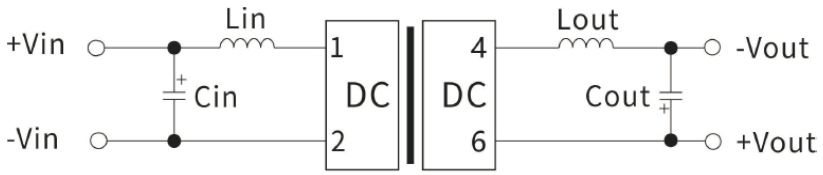
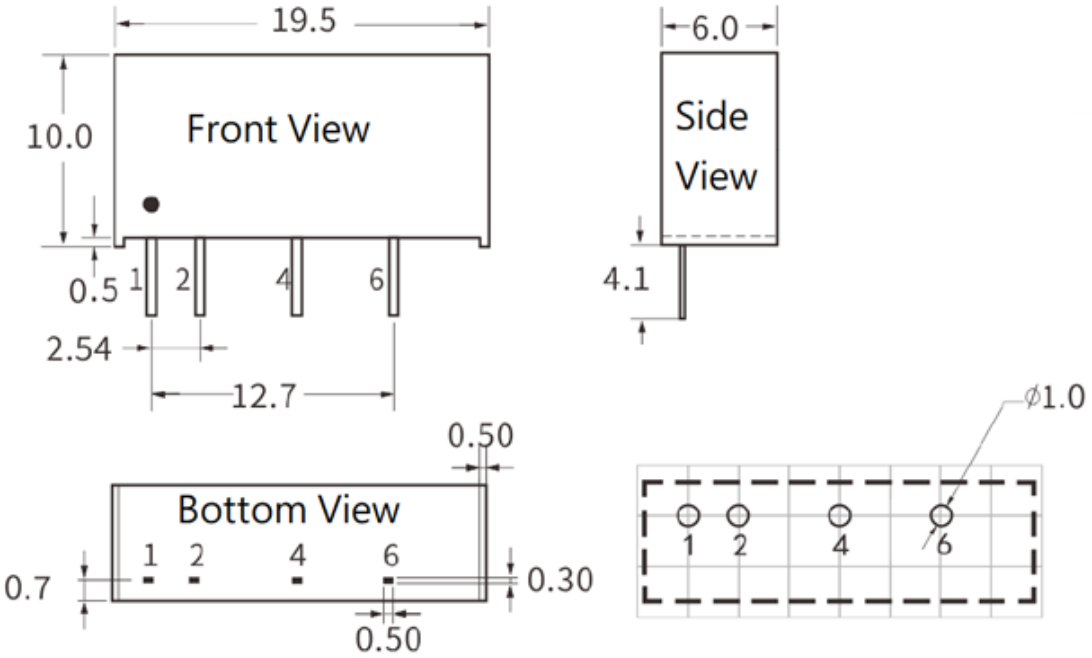


Table 2. Recommend EMI Reference Value

Vin (VDC)	3.3 / 5 / 9 / 12 / 15 / 24
Cin	4.7uF/50V
Cout	Refer to Table 1.
Lin	4.7uH
Lout	4.7uH

PACKAGE INFORMATION

Package Code: S Dimension: 19.5x6.0x10.0 mm (0.768x0.236x0.394 inch)



Pin-Out	
Pin #	Function
1	Vin
2	GND
4	0V
6	+Vo

Note: Grid 2.54 * 2.54mm

Unit: mm

General tolerances: ±0.25