

**DESCRIPTION**

The AD-IBxxxxLS-1WR3 series is designed for applications in distributed power systems that require the generation of a power supply isolated from the input power. They are suitable for: pure digital circuits, general low frequency analog circuits, relay drive circuits, data exchange circuits, etc.

FEATURES

- High efficiency up to 74%
- I/O Isolation test voltage 1500VDC
- -40°C to +85°C Working Temperature Range
- MTBF ≥3500KHrs
- Output short-circuit, over-current protection
- Industry standard pin-out, Small SIP package, plastic house.

ORDERING INFORMATION

Part Number	Input Voltage (VDC)	Output		Full Load Efficiency(%) Min/Typ	Capacitive Load (uF) Max.
	Nominal (Range)	Voltage (VDC)	Current (mA) Max/Min		
AD-IB0505LS-1WR3	5V (4.75~5.25)	5	200/20	64/68	100
AD-IB0509LS-1WR3		9	112/11.2	70/74	100
AD-IB0512LS-1WR3		12	84/8.4	70/74	100
AD-IB0515LS-1WR3		15	67/6.7	70/74	100
AD-IB1205LS-1WR3	12V (11.4~12.6)	5	200/20	64/68	100
AD-IB1209LS-1WR3		9	112/11.2	70/74	100
AD-IB1212LS-1WR3		12	84/8.4	70/74	100
AD-IB1215LS-1WR3		15	67/6.7	70/74	100
AD-IB2405LS-1WR3	24V (22.8~25.2)	5	200/20	64/68	100
AD-IB2409LS-1WR3		9	112/11.2	70/74	100
AD-IB2412LS-1WR3		12	84/8.4	70/74	100
AD-IB2415LS-1WR3		15	67/6.7	70/74	100

INPUT SPECIFICATIONS

Item	Operating Conditions	Min	Typ	Max	Unit
Input Voltage Range	5VDC input	-0.7	5	9	Vdc
	12VDC input	-0.7	12	18	
	24VDC input	0.7	24	30	
		--		--	
Reflect Ripple Current	5VDC input	--	15	--	mA
Input Filter		Capacitive filtering			
Hot Plug		Not support			

**OUTPUT SPECIFICATIONS**

Item	Operating Conditions	Min	Typ	Max	Unit
Output Load	Load Percentage	10	--	100	%
Load Regulation	10~100% Load	3.3VDC output	--	±3	%
		Others	--	±2	
Linear Regulation	Input voltage variation ±1	--	--	±0.25	%
Output Voltage Accuracy	100% load	--	--	±3	%
Ripple & Noise	Pure resistance load, 20MHz bandwidth peak-to-peak value	--	50	--	mVp-p
Temperature Drift Coefficient (Full Load)		--	--	±0.03	%/°C
Output Short Circuit Protection		1s			

GENERAL SPECIFICATIONS

Item	Test Condition	Min	Typ	Max	Unit
Isolation Voltage	Input-output, test time 1minute, leakage current less than 1mA	1500	--	--	VDC
Insulation Resistance	Input-output, insulation voltage 500VDC	1000	--	--	MΩ
Isolation Capacitor	Input-output, 100KHz/0.1V	--	20	--	pF
Operating Temperature	Refer to Fig1. Temperature Derating	-40	--	+85	°C
Storage Temperature		-55	--	+105	°C
Case Temperature Rise During Operation		--	25	--	%RH
Storage Humidity	No Condensation	5	--	95	%RH
Pin Soldering Temperature Resistance	Solder joint distance from housing 1.5mm, 10s	--	--	+300	°C
Switching Frequency	Full load, nominal voltage input	--	120	300	KHz
Vibrations	10-55Hz, 10G, 30Min along X,Y & Z				
Housing Material	Black flame retardant & heat resistant plastic (UL94V-0)				
MTBF	MIL-HDBK-217F@25°C	3.5X10 ⁶			KHrs



TYPICAL CHARACTERISTIC CURVE

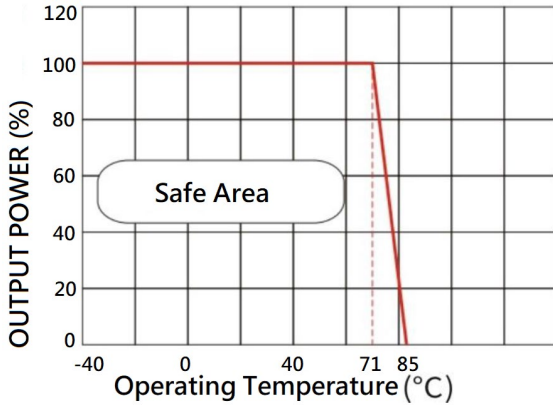


Fig 1. Temperature Derating

DESIGN REFERENCE

Typical Application

If want to reduce the input and output ripples, can connect a capacitor filter circuit to the input and output. The application circuit is shown in Fig 3 & 4. However, be careful to select the appropriate filter capacitor. If the capacitance is too large, it might cause startup problems.

Fig 3. Single Output

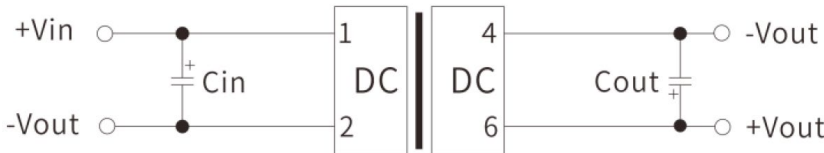


Fig 4. Dual Output

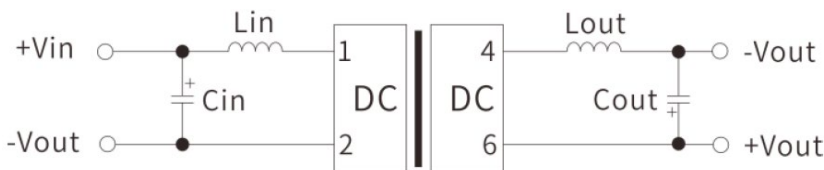


Vin (VDC)	Cin (uF)	Vo (VDC)	Cout (uF)
3.3/5	10	3.3/5	10
9/12	4.7	9/12	4.7
15/24	2.2	15/24	1

Table1. Recommend Input and output Capacitor Values

EMC Compliance Circuit

Fig 5. Single Output



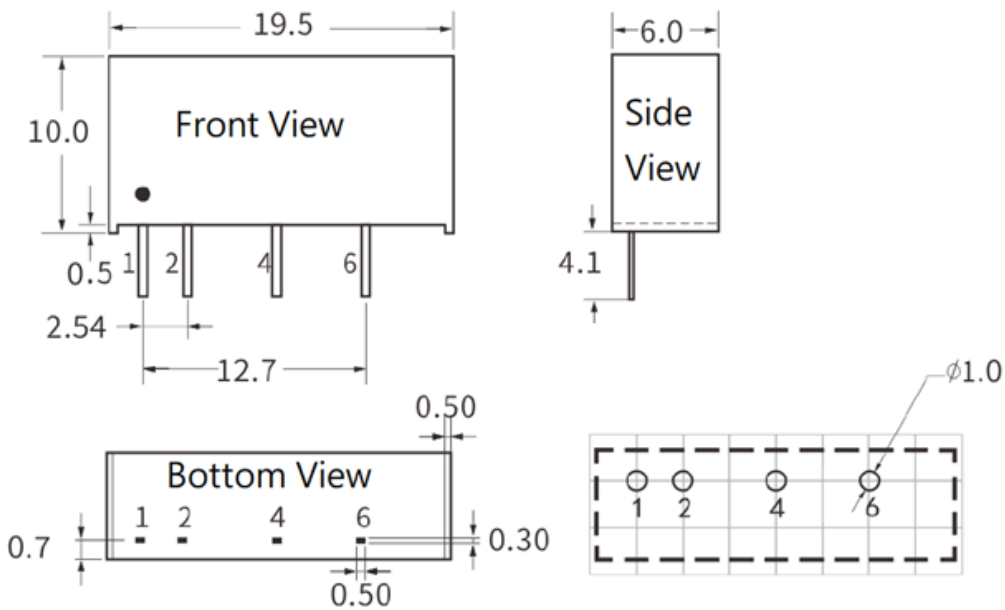
Vin(VDC)	3.3/5/12/15/24
Cin	Ref to Table.1
Cout	Ref to Table.1
Lin	4.7uH
Lout	4.7uH

Table 2. Recommend EMC Reference Value



PACKAGE INFORMATION

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



Note: Grid 2.54 * 2.54mm

Unit: mm

General tolerances: ± 0.25

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