

FEATURES:

- Wide input range
- Continuous short-circuit protection,self recover
- I/O isolation voltage 1.6KV
- Working temperature: -40℃~+105℃
- No additional components required
- Stable performance and high reliability (MTBF≥3500K hours)
- Industry standard pin-out
- Flame-retardant case to meet UL94-V0 requirements
- SIP package

Selection Guide

Part No.	INPUT		OUTPUT			Full Load Efficiency (%/Typ)	CapacitiveLoad(μF)
	Normalal (Vdc)	Range (Vdc)	Voltage (Vdc)	Min current (mA)	Max current (mA)		
URB2403S-6WR3	24	9-36	3.3	0	1350	78	1800
URB2405S-6WR3			5	0	1200	82	1000
URB2409S-6WR3			9	0	667	84	470
URB2412S-6WR3			12	0	500	85	470
URB2415S-6WR3			15	0	400	85	220
URB2424S-6WR3			24	0	250	85	100
URB4803S-6WR3	48	18-72	3.3	0	1350	79	1200
URB4805S-6WR3			5	0	1200	83	680
URB4809S-6WR3			9	0	667	84	330
URB4812S-6WR3			12	0	500	86	330
URB4815S-6WR3			15	0	400	87	150
URB4824S-6WR3			24	0	250	87	68

customized accepted ,pls contact sales for details

Input Specifications

Item	Min	Typ	Max	Test Conditions	
Input Current (full load / no-load)	-	489/12mA	502/18mA	12VDC nominal input series, nominal input voltage	3.3V output
	-	625/12mA	641/18mA		Others
	-	238/5mA	245/12mA	24VDC nominal voltage input series, nominal input	3.3V output
	-	305/5mA	313/12mA		5V output
	-	298/10mA	305/16mA		Others
Reflected Ripple Current	-	50mA	-		
Surge Voltage (1sec. max.)	-0.7VDC	-	25VDC	12VDC nominal input voltage	
	-0.7VDC	-	50VDC	24VDC nominal input voltage	
Start-up Voltage	-	-	9VDC	12VDC nominal input voltage	
	-	-	18VDC	24VDC nominal input voltage	

Input Under-voltage Protection	5.5VDC	6.5VDC	-	12VDC nominal input voltage
	12VDC	15.5VDC	-	24VDC nominal input voltage
Ctrl	NONE-			
	NONE			
Hot Plug	Unavailable			

Output Specifications

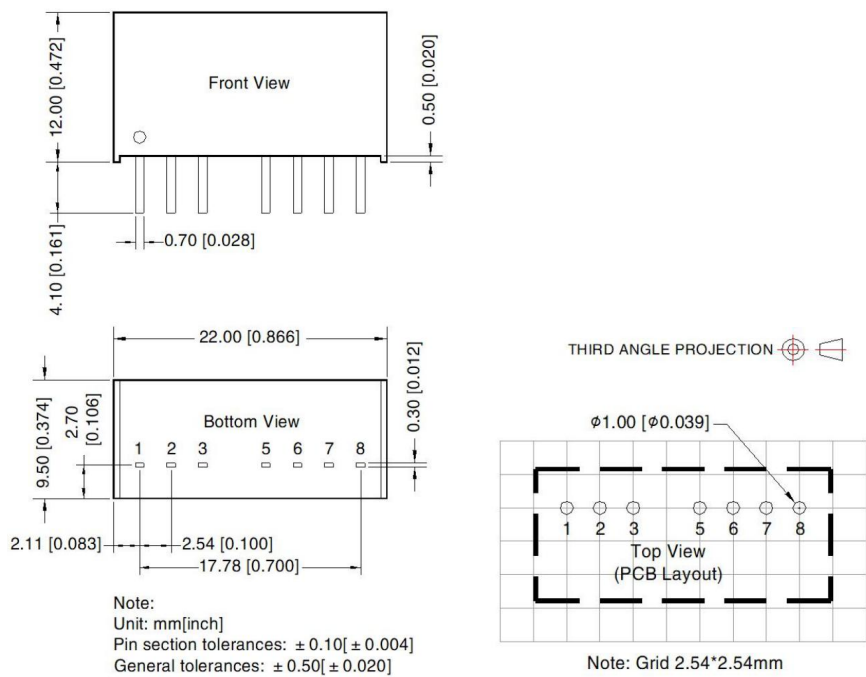
Item	Typ	Max	Test Conditions
Voltage Accuracy	±1%	±2%	5%-100% load
Line Regulation	±0.1%	±1%	Input voltage variation from low to high at full load
Load Regulation	±0.5%	±1.5%	5%-100% load
Ripple&Noise	50mVp-p	100mVp-p	20MHz bandwidth, 5%-100% load

General Specifications

Switching Frequency	300KHz(Typ)	100% full load, nominal input voltage
Short-Circuit Protection	Continuous, self-recovery	
Case Temperature Rise	15°C (Typ)	
Temperature Coefficient	0.03%/°C	100% full load
Pin Soldering Resistance Temperature	300°C	Soldering spot is 1.5mm away from case for 10 seconds
Isolation (Input-Output)	1.6KVDC	Input-output Electric Strength test for 1 minute with a leakage current of 1mA max.
Insulation Resistance (Input-Output)	1000MΩ	Input-output resistance 500Vdc
Operating Temperature	-40~+105°C	
Storage Temperature	-55~+125°C	
Storage Humidity	<95%	Non-condensing
Cooling Method	Free air convection	
Case Material	Black plastic; flame-retardant and heat-resistant (UL94 V-0)	
Weight	4.6g (Typ)	

**Unless specified, otherwise all other parameters are tested under the following conditions: nominal input voltage, pure resistive load, 25°C room temperature environment.

Dimensions and Recommended Layout



Pins

Pin	Mark		
1	GND		
2	Vin		
3	CTRL		
5	NC		
6	+Vo		
7	0V		
8	NC		

Recommended Circuit

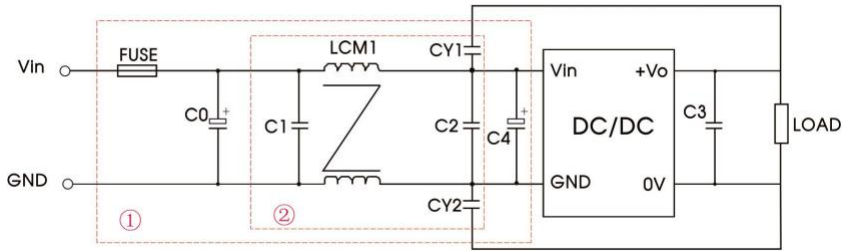


Recommended input and output capacitor values

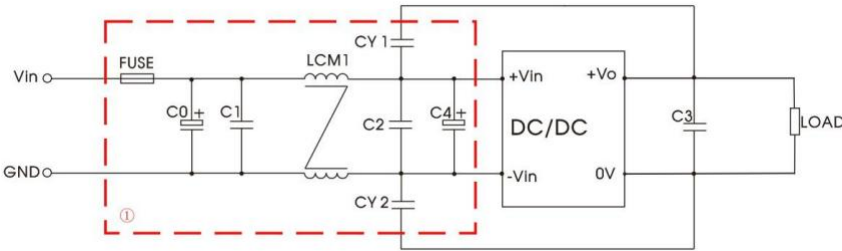
	Cin	Vout	Cout	Cout0	Cout1
Vin:24VDC	100uF/100V	3.3/5/9VDC	22uF/16V	1uF/50F	10uF/50V Tantalum capacitor
		12/15VDC	22uF/25V	1uF/50F	10uF/50V Tantalum capacitor
		24VDC	22uF/50V	1uF/50F	10uF/50V Tantalum capacitor

Vin:48VDC	100uF/100V	3.3/5VDC	22uF/16V	1uF/50F	10uF/50V Tantalum capacitor
		9/12/15/24VDC	10uF/50V	1uF/50F	10uF/50V Tantalum capacitor
		12/15VDC	22uF/25V		
		24VDC	22uF/50V		

EMC Circuit



Model	Vin: 24VDC
FUSE	Choose according to actual input current
C0/C4	330μF/50V
C1/C2	10μF/50V
C3	22μF/50V
LCM1	470μH, recommended to use MORNSUN's FL2D-13-471R3
CY1/CY2	1nF/400VAC



Model	Vin: 48VDC
FUSE	Choose according to actual input current
C0	200 μ F/100V
C1/C2	10 μ F/100V
C3	22 μ F/100V
LCM1	470 μ H, recommended to use MORNSUN's FL2D-13-471R3
C4	330 μ F/100V
CY1/CY2	1nF/400VAC

Noted

1. Input current: Ensure that the output current of the power supply meets the instantaneous starting current of the power module (that is, twice the average input current of the power module).
2. Output load requirements: Avoid no-load use. When the actual power consumption of the load is less than 10% of the rated output power of the module or no load occurs, connect an external resistance to the output end (the sum of the external resistance and the load power is greater than or equal to 10% of the rated load) or select a module with a smaller rated power.
3. The external capacitance of the output end should not be too large; otherwise, the module may be overcurrent or poorly started. For details, see the external capacitance recommendation table.
4. External LC filter circuit can be connected for occasions with high ripple noise requirements.