

FEATURES:

- Fixed voltage input, single/dual unregulated output, 1W
- Continuous short-circuit protection, self recover
- I/O isolation voltage 3KV
- 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	Capacitive Load (μF)
	Normal (Vdc)	Range (Vdc)	Voltage (Vdc)	Min current (mA)	Max current (mA)		
F0303S-1WR3	3.3	2.97-3.63	3.3	31	303	74	2200
F0305S-1WR3			5	20	200	78	2200
F0309S-1WR3			9	12	111	80	1000
F0312S-1WR3			12	9	83	80	560
F0315S-1WR3			15	7	67	80	560
F0324S-1WR3			24	5	42	82	220
A0503S-1WR3	5	4.5-5.5	±3.3	±15	±151	74	1000
A0505S-1WR3			±5	±10	±100	82	1000
A0509S-1WR3			±9	±6	±56	83	470
A0512S-1WR3			±12	±5	±42	83	220
A0515S-1WR3			±15	±4	±33	83	220
A0524S-1WR3			±24	±3	±21	85	100
F0503S-1WR3			3.3	31	303	74	2200
F0505S-1WR3			5	20	200	78	2200
F0509S-1WR3			9	12	111	80	1000
F0512S-1WR3			12	9	83	80	560
F0515S-1WR3			15	7	67	80	560
F0524S-1WR3			24	5	42	82	220
E1203S-1WR3	12	10.8-13.2	±3.3	±15	±151	74	1000
E1205S-1WR3			±5	±10	±100	82	1000
E1209S-1WR3			±9	±6	±56	83	470
E1212S-1WR3			±12	±5	±42	83	220
E1215S-1WR3			±15	±4	±33	83	220
E1224S-1WR3			±24	±3	±21	85	100
F1203S-1WR3			3.3	31	303	74	2200
F1205S-1WR3			5	20	200	78	2200
F1209S-1WR3			9	12	111	80	1000

F1212S-1WR3			12	9	83	80	560
F1215S-1WR3			15	7	67	80	560
F1224S-1WR3			24	5	42	82	220
E1503S-1WR3	15	13.5-16.5	±3.3	±15	±151	74	1000
E1505S-1WR3			±5	±10	±100	82	1000
E1509S-1WR3			±9	±6	±56	83	470
E1512S-1WR3			±12	±5	±42	83	220
E1515S-1WR3			±15	±4	±33	83	220
E1524S-1WR3			±24	±3	±21	85	100
F1505S-1WR3			5	20	200	78	2200
F1509S-1WR3			9	12	111	80	1000
F1512S-1WR3			12	9	83	80	560
F1515S-1WR3			15	7	67	80	560
F1524S-1WR3			24	5	42	82	220
E2403S-1WR3	24	21.6-26.4	±3.3	±15	±151	74	1000
E2405S-1WR3			±5	±10	±100	82	1000
E2409S-1WR3			±9	±6	±56	83	470
E2412S-1WR3			±12	±5	±42	83	220
E2415S-1WR3			±15	±4	±33	83	220
E2424S-1WR3			±24	±3	±21	85	100
F2403S-1WR3			3.3	31	303	74	2200
F2405S-1WR3			5	20	200	78	2200
F2409S-1WR3			9	12	111	80	1000
F2412S-1WR3			12	9	83	80	560
F2415S-1WR3			15	7	67	80	560
F2424S-1WR3			24	5	42	82	220

customized accepted ,pls contact sales for details

Input Specifications

Input Filter	Capacitive Filter	
Ctrl	NONE	
	NONE	
Hot Plug	Unavailable	

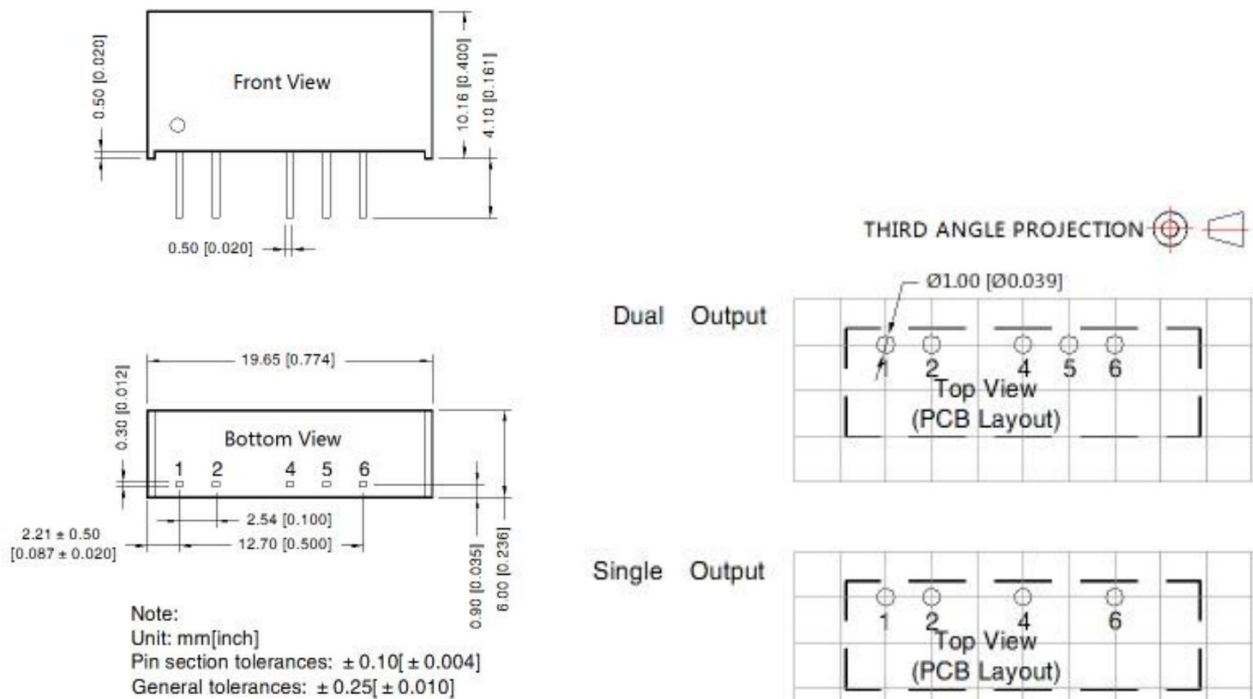
Output Specifications

Item		Min	Typ	Max	Test Conditions
Voltage Accuracy					
Line Regulation		-	-	±1.2%	Input voltage ±1%
Load Regulation	3.3V,±3.3Vout	-	-	15%	10% to 100% full load
	5V,±5Vout	-	-	10%	
	9V,±9Vout	-	-	8%	
	12V,±12Vout	-	-	6%	
	15V,±15Vout	-	-	6%	
	24V,±24Vout	-	-	5%	

Ripple&Noise	-	50mVp-p	75mVp-p	20MHz Bandwidth, full load
Gernerall Specifications				
Switching Frequency	250KHz(Typ)			100% full load, nominal input voltage
Short-Circuit Protection	Continuous, self-recovery			
Case Temperature Rise	25℃（Typ）			
Temperature Coefficient	0.02%/℃			100% full load
Pin Soldering Resistance Temperature	300℃			Soldering spot is 1.5mm away from case for 10 seconds
Isolation（Input-Output）	3KVDC			Input-output electric strength test for 1 minute with a leakage current
Insulation Resistance（Input-Output）	1000MΩ			Input-output resistance 500Vdc
Operating Temperature	-40～+105℃			
Storage Temperature	-55～+125℃			
Storage Humidity	<95%RH			Non-condensing
Cooling Method	Free air convection			
Case Material	Black plastic; flame-retardant and heat-resistant (UL94 V-0)			
Weight	2g（Typ）			

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

Dimensions and Recommended Layout

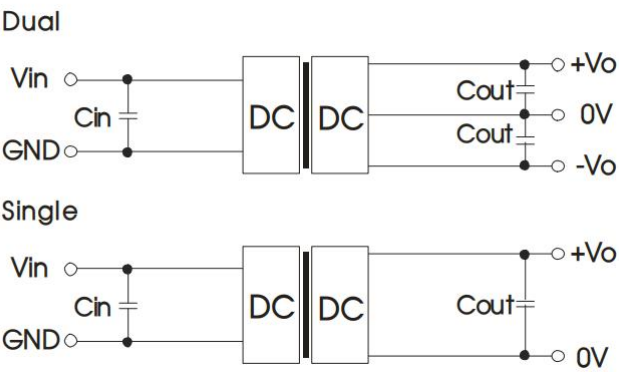


Pin-out

Pin	Singe	Dual	
1	Vin	Vin	

2	GND	GND	
4	0V	-Vo	
5	No Pin	0V	
6	+Vo	+Vo	

Recommended Circuit



Recommended input and output capacitor values						
Vin		Cin	Single Vout	Cout	Dual Vout	Cout
3.3V	3.3VDC	10uF/16VDC	3.3/5VDC	10uF/16V	±3.3/±5VDC	10uF/16V
	-	-	9/12VDC	2.2uF/25V	±9/±12VDC	2.2uF/25V
	-	-	15/24VDC	1uF/50V	±15/±24VDC	1uF/50V
	5VDC	4.7uF/16VDC	3.3/5VDC	10uF/16V	±3.3/±5VDC	4.7uF/16V
	12VDC	2.2uF/25VDC	7.2/9VDC	2.2uF/16V	±9VDC	1uF/16V
	15VDC	2.2uF/25VDC	12VDC	2.2uF/25VDC	±12VDC	1uF/25V
	24VDC	1uF/50V	15VDC	1uF/25VDC	±15VDC	0.47uF/25V
	-	-	24VDC	1uF/50V	±24VDC	0.47uF/50V

Note

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.

*The final interpretation right of the product belongs to ECCO ELECTRONICS.