

FEATURES:

- Fixed voltage input, unregulated single/dual output, 3W
- 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 V-0 requirements
- DIP 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)		
F0303D-3WR3	3.3	2.97-3.63	3.3	50	500	79	2400
F0305D-3WR3			5	50	500	85	2400
F0309D-3WR3			9	33	333	85	1000
F0312D-3WR3			12	25	250	85	560
F0315D-3WR3			15	20	200	86	560
F0324D-3WR3			24	13	125	86	220
E0303D-3WR3			±3.3	±13	±250		
E0305D-3WR3			±5	±13	±250		
E0309D-3WR3			±9	±8	±167		
E0312D-3WR3			±12	±5	±104		
E0315D-3WR3			±15	±4	±83		
E0324D-3WR3			±24	±3	±52		
F0503D-3WR3	5	4.5-5.5	3.3	50	500	79	2400
F0505D-3WR3			5	50	500	85	2400
F0509D-3WR3			9	33	333	85	1000
F0512D-3WR3			12	25	250	85	560
F0515D-3WR3			15	20	200	86	560
F0524D-3WR3			24	13	125	86	220
E0503D-3WR3			±3.3	±13	±250		
E0505D-3WR3			±5	±13	±250		
E0509D-3WR3			±9	±8	±167		
E0512D-3WR3			±12	±5	±104		
E0515D-3WR3			±15	±4	±83		
E0524D-3WR3			±24	±3	±52		
F1203D-3WR3	12	10.8-13.2	3.3	50	500	79	2400
F1205D-3WR3			5	50	500	85	2400
F1209D-3WR3			9	33	333	85	1000

F1212D-3WR3			12	25	250	85	560
F1215D-3WR3			15	20	200	86	560
F1224D-3WR3			24	13	125	86	220
E1203D-3WR3			±3.3	±13	±250		
E1205D-3WR3			±5	±13	±250		
E1209D-3WR3			±9	±8	±167		
E1212D-3WR3			±12	±5	±104		
E1215D-3WR3			±15	±4	±83		
E1224D-3WR3			±24	±3	±52		
F1503D-3WR3	15	13.5-16.5	3.3	50	500	79	2400
F1505D-3WR3			5	50	500	85	2400
F1509D-3WR3			9	33	333	85	1000
F1512D-3WR3			12	25	250	85	560
F1515D-3WR3			15	20	200	86	560
F1524D-3WR3			24	13	125	86	220
E1503D-3WR3			±3.3	±13	±250		
E1505D-3WR3			±5	±13	±250		
E1509D-3WR3			±9	±8	±167		
E1512D-3WR3			±12	±5	±104		
E1515D-3WR3			±15	±4	±83		
E1524D-3WR3			±24	±3	±52		
F2403D-3WR3	24	21.6-26.4	3.3	50	500	79	2400
F2405D-3WR3			5	50	500	85	2400
F2409D-3WR3			9	33	333	85	1000
F2412D-3WR3			12	25	250	85	560
F2415D-3WR3			15	20	200	86	560
F2424D-3WR3			24	13	125	86	220
E2403D-3WR3			±3.3	±13	±250		
E2405D-3WR3			±5	±13	±250		
E2409D-3WR3			±9	±8	±167		
E2412D-3WR3			±12	±5	±104		
E2415D-3WR3			±15	±4	±83		
E2424D-3WR3			±24	±3	±52		

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	-	-	-	

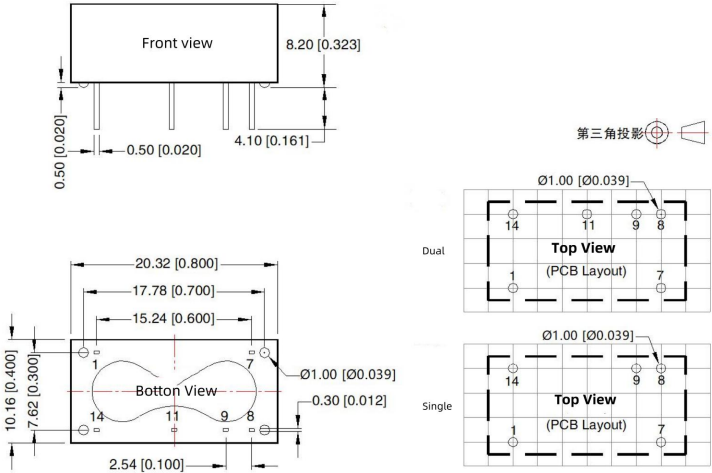
Line Regulation		-	-	±1.2%	Input voltage ±1%
Load Regulation	3.3Vout	-	15%	-	10% to 100% full load
	5Vout	-	7%	-	
	9Vout	-	5%	-	
	12Vout	-	5%	-	
	15Vout	-	4%	-	
	24Vout	-	3%	-	
Ripple&Noise			50mVp-p	75mVp-p	20MHz Bandwidth, full load

General 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%	Non-condensing
Cooling Method	Free air convection	
Case Material	Black plastic; flame-retardant and heat-resistant (UL94 V-0)	
Weight	2.1g (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



Note:
Unit: mm[inch]
Pin section tolerances: $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 0.25[\pm 0.010]$

Pinout

Pin	Single	Dual	
1	GND	GND	
7	NC	NC	
8	0V	0V	
9	+Vo	+Vo	
11	No Pin	-Vo	
14	Vin	Vin	

Recommended Circuit

Dual



Single



Recommended input and output capacitor values					
Vin	Cin	Dual Vout	Cout	Single Output	Cout
3.3VDC	10uF/16V	± 3.3 VDC	4.7uF/16V	3.3VDC	10uF/16V

5VDC	4.7uF/16V	±5/7VDC	4.7uF/16V	5VDC	10uF/16V
12VDC	2.2uF/25V	±9VDC	1uF/16V	9VDC	2.2uF/25V
15VDC	2.2uF/25V	±12/15VDC	1uF/25V	12VDC	2.2uF/25V
24VDC	1uF/50V	±24VDC	0.47uF/50VDC	15VDC	2.2uF/25V
-	-	-	-	24VDC	1uF/50V

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.

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