FEATURES：

- Fixed voltage input,unregulated single 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 V-0 requirements
- SIP package

Selection Guide

Part No.	INPUT		OUTPUT			Full Load Efficiency （%/Typ）	CapacitiveLoad(μF)
	Norminal （Vdc）	Range （Vdc）	Voltage (Vdc)	Min current (mA)	Max current (mA)		
F0303M-1WR3	3.3	2.97-3.63	3.3	31	303	74	2200
F0305M-1WR3			5	20	200	82	2200
F0309M-1WR3			9	12	111	83	1000
F0312M-1WR3			12	9	83	84	560
F0315M-1WR3			15	7	67	84	560
F0324M-1WR3			24	5	42	85	220
F0503M-1WR3	5	4.5-5.5	3.3	31	303	74	2200
F0505M-1WR3			5	20	200	82	2200
F0509M-1WR3			9	12	111	83	1000
F0512M-1WR3			12	9	83	84	560
F0515M-1WR3			15	7	67	84	560
F0524M-1WR3			24	5	42	85	220
F0903M-1WR3	9	8.1-9.9	3.3	31	303	74	2200
F0905M-1WR3			5	20	200	82	2200
F0909M-1WR3			9	12	111	83	1000
F0912M-1WR3			12	9	83	84	560
F0915M-1WR3			15	7	67	84	560
F0924M-1WR3			24	5	42	85	220
F1203M-1WR3	12	10.8-13.2	3.3	31	303	74	2200
F1205M-1WR3			5	20	200	82	2200
F1209M-1WR3			9	12	111	83	1000
F1212M-1WR3			12	9	83	84	560
F1215M-1WR3			15	7	67	84	560
F1224M-1WR3			24	5	42	85	220
F1503M-1WR3	15	13.5-16.5	3.3	31	303	74	2200
F1505M-1WR3			5	20	200	82	2200
F1509M-1WR3			9	12	111	83	1000

F1512M-1WR3			12	9	83	84	560
F1515M-1WR3			15	7	67	84	560
F1524M-1WR3			24	5	42	85	220
F2403M-1WR3	24	21.6-26.4	3.3	31	303	74	2200
F2405M-1WR3			5	20	200	82	2200
F2409M-1WR3			9	12	111	83	1000
F2412M-1WR3			12	9	83	84	560
F2415M-1WR3			15	7	67	84	560
F2424M-1WR3			24	5	42	85	220

customized accepted ,pls contact sales for details

Input Specifications

Input Filter	Capacitive Filter	
Ctrl	NONE	
	NONE	
Hot Plug	Unavailable	

Output Specifications

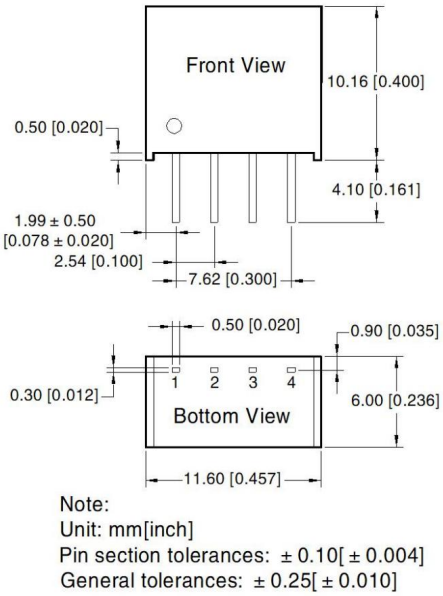
Item		Min	Typ	Max	Test Conditions
Voltage Accuracy		0%	±5%	±10%	Input voltage range and load
Load Regulation	3.3Vout	-	15%	18%	10% to 100% full load
	5Vout	-	8%	13%	
	9Vout	-	7%	9%	
	12Vout	-	6%	8%	
	15Vout	-	5%	8%	
	24Vout	-	5%	7%	
Line Regulation		-		±5%	Input voltage ±1%
Ripple&Noise		-	50mVp-p	75mVp-p	20MHz Bandwidth, full load

Gerneral Specifications

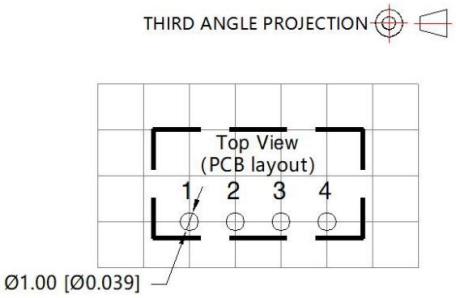
Switching Frequency	250KHz(Typ)	100% full load, nominal input voltage
Short-Circuit Protection	Continuous, self-recovery	
Case Temperature Rise	25℃（Typ）	
Temperature Coefficient	0.02%/℃	100% full load
Pin Soldering Resistance Temperature	300℃	Soldering spot is 1.5mm away from case for 10 seconds
Isolation（Input-Output）	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	1.4g（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: ± 0.10[± 0.004]
General tolerances: ± 0.25[± 0.010]



Note: Grid 2.54*2.54mm

Pins

Pin	Mark		
1	GND		
2	Vin		
3	0V		
4	+Vo		

Recommended Circuit

Vin	Cin	Vout	Cout
3.3V	4.7uF/16V	3.3V	10uF/16V
5V	4.7uF/16V	5V	10uF/16V
9V	4.7uF/16V	9V	10uF/16V
12V	2.2uF/25V	9V	2.2uF/25V
15V	2.2uF/25V	12V	2.2uF/25V
24V	4.7uF/50V	15V/24V	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.