

FEATURES:

- Fixed voltage input,single/dual unregulated output,2W
- 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)
	Normalal (Vdc)	Range (Vdc)	Voltage (Vdc)	Min current (mA)	Max current (mA)		
E0503S-2WR3	5	4.5-5.5	±3.3	±31	±303	79	1200
E0505S-2WR3			±5	±20	±200	82	1200
E0509S-2WR3			±9	±12	±111	85	470
E0512S-2WR3			±12	±9	±83	86	220
E0515S-2WR3			±15	±7	±67	86	220
E0524S-2WR3			±24	±5	±42	84	100
F0503S-2WR3			3.3	40	400	78	2200
F0505S-2WR3			5	40	400	84	2200
F0507S-2WR3			7.2	28	278	84	1000
F0509S-2WR3			9	23	222	84	1000
F0512S-2WR3			12	17	167	85	560
F0515S-2WR3			15	14	134	85	560
F0524S-2WR3			24	9	83	86	220
E1203S-2WR3	12	10.8-13.2	±3.3	±31	±303	79	1200
E1205S-2WR3			±5	±20	±200	82	1200
E1207S-2WR3			±9	±12	±111	85	470
E1209S-2WR3			±12	±9	±83	86	220
E1212S-2WR3			±15	±7	±67	86	220
E1215S-2WR3			±24	±5	±42	84	100
E1224S-2WR3			3.3	40	400	78	2200
F1203S-2WR3			5	40	400	84	2200
F1205S-2WR3			7.2	28	278	84	1000
F1209S-2WR3			9	23	222	84	1000
F1212S-2WR3			12	17	167	85	560
F1215S-2WR3			15	14	134	85	560
F1224S-2WR3			24	9	83	86	220
E1505S-2WR3	15	13.5-16.5	±5	±20	±200	82	1200

E1515S-2WR3			±15	±7	±67	82	220
F1505S-2WR3			5	40	400	84	2200
F1515S-2WR3			15	14	134	85	560
F1524S-2WR3			24	9	83	86	220
E2403S-2WR3	24	21.6-26.4	±3.3	±31	±303	79	1200
E2405S-2WR3			±5	±20	±200	82	1200
E2407S-2WR3			±9	±12	±111	85	470
E2409S-2WR3			±12	±9	±83	86	220
E2412S-2WR3			±15	±7	±67	86	220
E2415S-2WR3			±24	±5	±42	84	100
E2424S-2WR3			3.3	40	400	78	2200
F2403S-2WR3			5	40	400	84	2200
F2405S-2WR3			7.2	28	278	84	1000
F2409S-2WR3			9	23	222	84	1000
F2412S-2WR3			12	17	167	85	560
F2415S-2WR3			15	14	134	85	560
F2424S-2WR3			24	9	83	86	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	3.3Vout	0%	5%	12%	input voltage range and load
	5Vout	0%	3%	10%	
	9/12/15/24Vout	-2%	3%	8%	
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

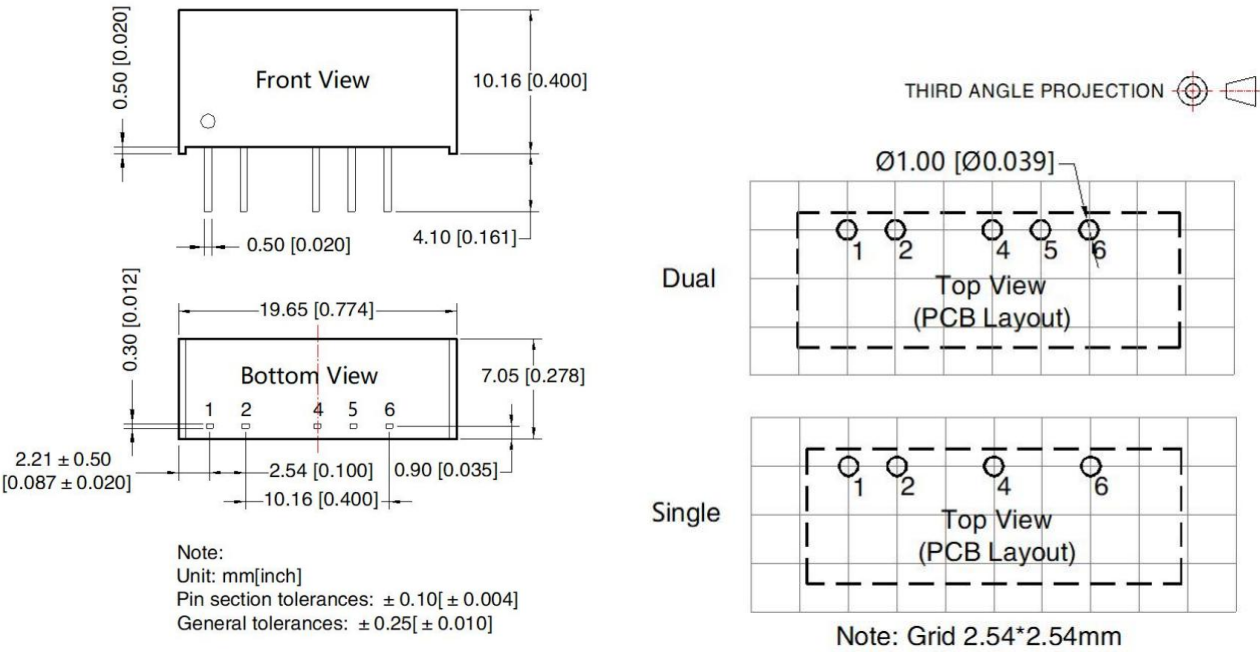
General Specifications

Switching Frequency	250KHz(Typ)	100% full load, nominal input voltage
Short-Circuit Protection	Continuous, self-recovery	
Case Temperature Rise	15℃ (Typ)	
Temperature Coefficient	0.02%/℃	100% full load
Pin Soldering Resistance	300℃	Soldering spot is 1.5mm away from

Temperature		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 (UL94V-0)	
Weight	2.3g (Typ)	

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

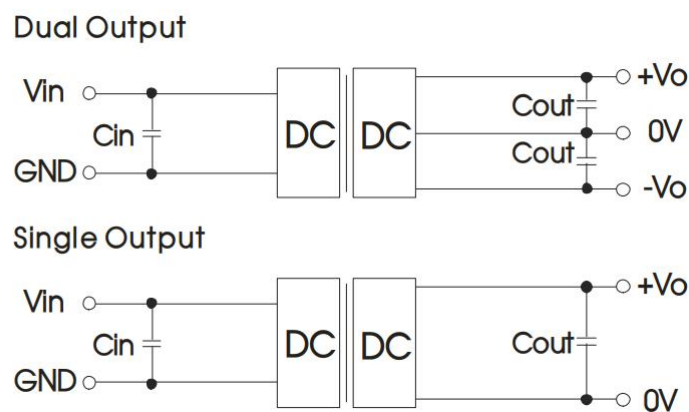
Dimensions and Recommended Layout



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
5VDC	10uF/16V	3.3VDC	10uF/16V	±3.3VDC	4.7uF/16V
12VDC	2.2uF/25V	5VDC	10uF/16V	±5VDC	4.7uF/16V
15VDC	2.2uF/25V	7.2VDC	10uF/16V	±7.2VDC	2.2uF/25V
24VDC	1uF/50V	9VDC	2.2uF/25V	±9VDC	2.2uF/25V
-	-	12VDC	2.2uF/25V	±12VDC	1uF/25V
-	-	15VDC	1uF/25V	±15VDC	1uF/25V
-	-	24VDC	1uF/50V	±24VDC	0.47uF/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.