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
- DIP 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)		
E0503D-2WR3	5	4.5-5.5	±3.3	±31	±303	79	1200
E0505D-2WR3			±5	±20	±200	82	1200
E0509D-2WR3			±9	±12	±111	85	470
E0512D-2WR3			±12	±9	±83	86	220
E0515D-2WR3			±15	±7	±67	86	220
E0524D-2WR3			±24	±5	±42	84	100
F0503D-2WR3			3.3	40	400	78	2200
F0505D-2WR3			5	40	400	84	2200
F0507D-2WR3			7.2	28	278	84	1000
F0509D-2WR3			9	23	222	84	1000
F0512D-2WR3			12	17	167	85	560
F0515D-2WR3			15	14	134	85	560
F0524D-2WR3			24	9	83	86	220
E1203D-2WR3	12	10.8-13.2	±3.3	±31	±303	79	1200
E1205D-2WR3			±5	±20	±200	82	1200
E1207D-2WR3			±9	±12	±111	85	470
E1209D-2WR3			±12	±9	±83	86	220
E1212D-2WR3			±15	±7	±67	86	220
E1215D-2WR3			±24	±5	±42	84	100
E1224D-2WR3			3.3	40	400	78	2200
F1203D-2WR3			5	40	400	84	2200
F1205D-2WR3			7.2	28	278	84	1000
F1209D-2WR3			9	23	222	84	1000
F1212D-2WR3			12	17	167	85	560
F1215D-2WR3			15	14	134	85	560
F1224D-2WR3			24	9	83	86	220
E1505D-2WR3	15	13.5-16.5	±5	±20	±200	82	1200

E1515D-2WR3			±15	±7	±67	82	220
F1505D-2WR3			5	40	400	84	2200
F1515D-2WR3			15	14	134	85	560
F1524D-2WR3			24	9	83	86	220
E2403D-2WR3	24	21.6-26.4	±3.3	±31	±303	79	1200
E2405D-2WR3			±5	±20	±200	82	1200
E2407D-2WR3			±9	±12	±111	85	470
E2409D-2WR3			±12	±9	±83	86	220
E2412D-2WR3			±15	±7	±67	86	220
E2415D-2WR3			±24	±5	±42	84	100
E2424D-2WR3			3.3	40	400	78	2200
F2403D-2WR3			5	40	400	84	2200
F2405D-2WR3			7.2	28	278	84	1000
F2409D-2WR3			9	23	222	84	1000
F2412D-2WR3			12	17	167	85	560
F2415D-2WR3			15	14	134	85	560
F2424D-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

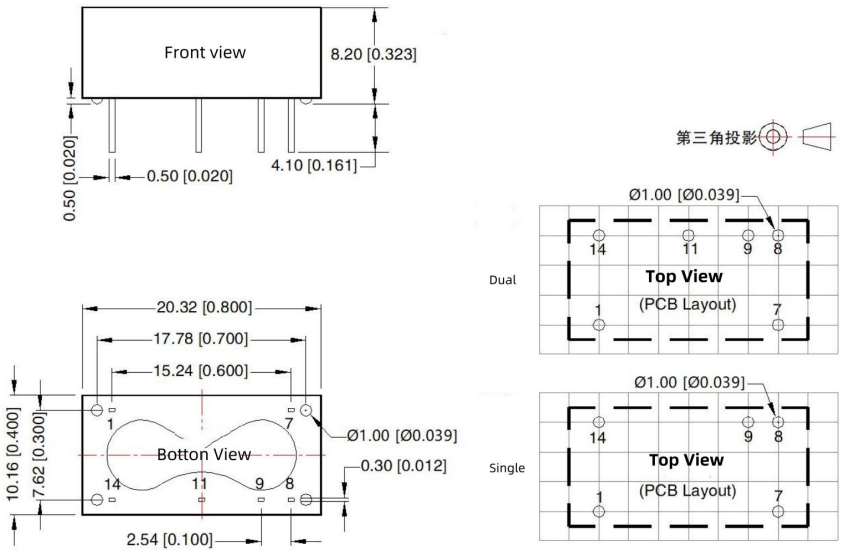
Gerneral Specifications

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 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 (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

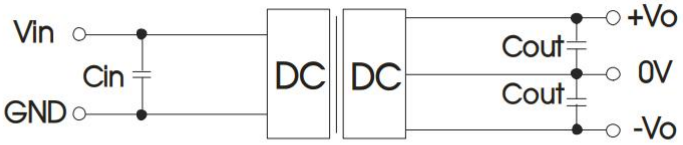


Pin-out

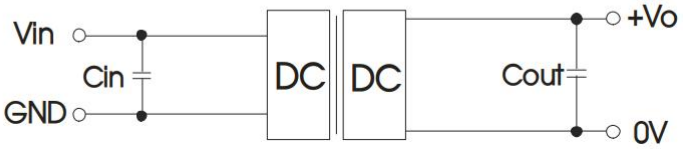
Pin	Singe	Dual	
1	GND	GND	
7	NC	NC	
8	0V	0V	
9	+Vo	+Vo	
11	No Pin	-Vo	
14	Vin	Vin	

Recommended Circuit

Dual Output



Single Output



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.