

F05_S-1W Power Module Model Table

SELECTION OF POWER SUPPLY MODULE

F05_S-1WR3 Series: 1W rated voltage input, isolated unregulated single output

- 4 Pin, international standard pins
- Continuous short-circuit protection
- High conversion efficiency, up to 90%
- Low no-load power consumption 0.025W(Typ.)
- Isolation voltage $\leq 3000\text{VDC}$
- Working temperature $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Model	Nominal Value($\pm 10\%$)	Output Voltage/Current
F0503S-1WR3	5V(4.5V-5.5V)	3.3V/303mA
F0505S-1WR3		5V/200mA
F0509S-1WR3		9V/111mA
F0512S-1WR3		12V/84mA
F0515S-1WR3		15V/67mA
F0524S-1WR3		24V/42mA

※ The picture only for reference, please refer to the actual product

Product Feature

1. characteristic: Constant voltage input, isolated non stabilized voltage single output, 1W
2. Isolation voltage $\leq 3000\text{VDC}$
3. Low no-load power consumption 0.025W(Typ.)
4. Transfer efficiency up to 90%
5. Output short-circuit protection: continuous short circuit protection, automatic recovery
6. The voltage of the input power supply is relatively stable. (Voltage variation range $\pm 10\%V_{in}$)
7. Operating temperature range : $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
8. Small SIP package
9. International standard pin, direct installation of PCB board.
10. High reliability and long life design, continuous working time MTBF ≥ 3.5 million hours (3500000Hrs)

Enviroment Condition

Project name	Qualification	Unit	Notes
Working enviroment temper ature	-40—+85	℃	
Storage temperture	-40—+125 ℃	℃	
Relative humidity	5—95	%	
Heat dissipation mode	natural cooling		
Atmospheric pressure	80—106 Kpa	Kpa	
Ripple & Noise	30/80(max)	Mvp-p	Pure resistive load, 20MHz broadband, peak-to-peak

Input Characteristics

Project name	Working conditions	Unit	Notes
Related input voltage	5	Vdc	
Input voltage range	4.5-5.5	Vdc	
Maximum input current	≤0.3	A	
Reflection ripple current	15	mA	DC5V rated input voltage series
Impulse voltage	≤9	Vdc	
Starting voltage	4.5	Vdc	
Input undervoltage protection	---	Vdc	
Start-up delay	---	ms	Rated input voltage and constant resistance load
Input filter type		Capacitance filter type	
Hot plugged		Non-support	

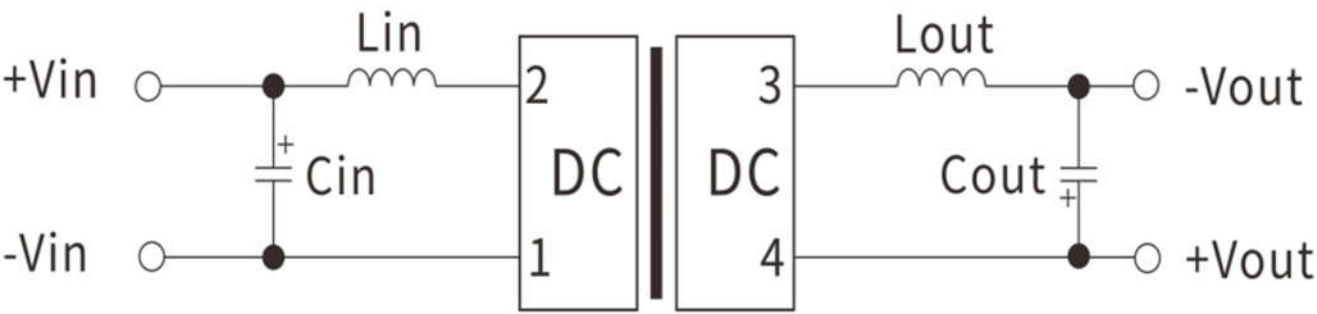
Output Characteristics(12v/84mA)

Project name	Technical requirement	Unit	Notes
No load rated output voltage	12V±15%	Vdc	
Short-time maximum output current	≥94	mA	
Rated output current	84	mA	
Voltage regulation	±1.5	%	
Load regulation	±12	%	
Transfer efficiency	Vin=12Vdc, output full load	90%	
Output grain sweep noise(mVp-p)	Pure resistance load, 20MHz bandwidth, peak to peak value	mV	
Output over-voltage protection	Outputting the maximum voltage	110-160%	Vdc
Insulation voltage	Input- output, test in 1 minute, leakage current less-than 1mA/1500V		
Insulation resisittance	Input- output, insulation volaltge	500VDC/1000MΩ	MΩ
Isolation capacitance	Input- output, 100KHz/0.1V	20pF	-

Note:

1、 The above is only a list of typical products. If you need products beyond the list, please contact our sales. 2、 The maximum capacitive load indicates the maximum capacitive load that + VO or - vo can be connected to,If the value is exceeded, the product will not start normally..

Typical Application Circuits



EMC parameter recommendation

Component No.	Function	Recommended value
Cin Capacitance	Filter capacitor	4.7μA/50V
Cout Capacitance	Filter capacitor	2.2-10μA/50V
Lin inductance	Filter inductance	Inductance: 4.7uH
Lout inductance	Cin Capacitance	Inductance: 4.7uH

Notes : Output Load Requirements

In order to ensure that the module can work efficiently and reliably, the minimum output load should not be less than 10% of the rated load.If the power you need is really small, please connect a resistor in parallel between the positive and negative poles of the output terminal (the sum of the actual power used by the resistor is greater than or equal to 10% of the rated power and the rated power of the selected resistor must be greater than 5 times of the actual power used, otherwise the temperature of the resistor will be higher)