

AC/DC Power switch



SM-PLG06A-6W single circuit PL bare circuit board range

SM-PLG06A Specifications



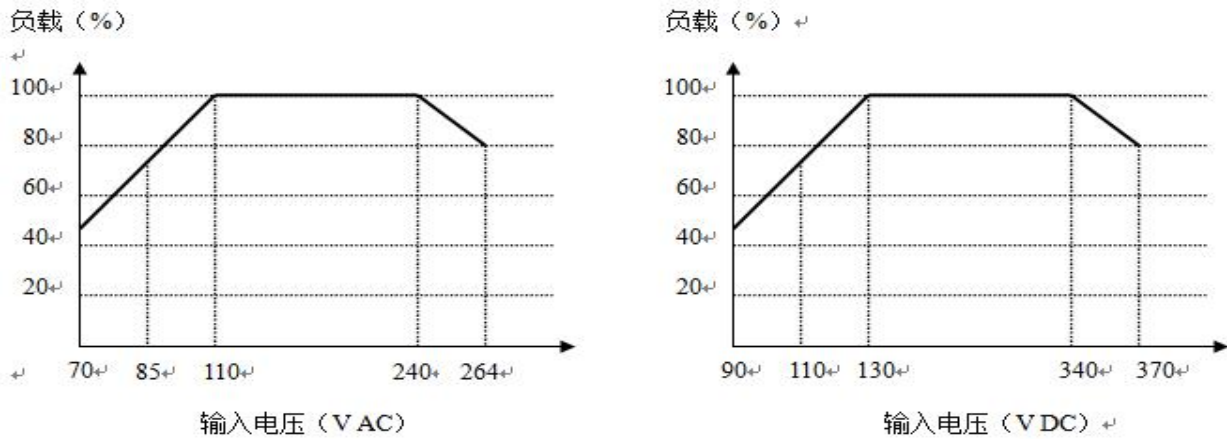
产品特点： product characteristics

- 1.The product is easy to install and can be used directly on the motherboard
- 2.Fixed installing holes in four corners to prevent product power outages resulting in movement / vibration . fixed hole diameter each :3.2mm
- 3.85-264V AC 或 110-370V DC。 Globally used input voltage : 85-264V AC OR 110-370V DC
- 4.High efficiency, high power density, low output ripple noise and high output voltage accuracy
- 5.High input and output isolation
- 6.With full protections of over-current ,short-circuit and the temperature
- 7.Output built-in LC π filtering, without external filter circuit.
- 8.Guarantee period : 3 years

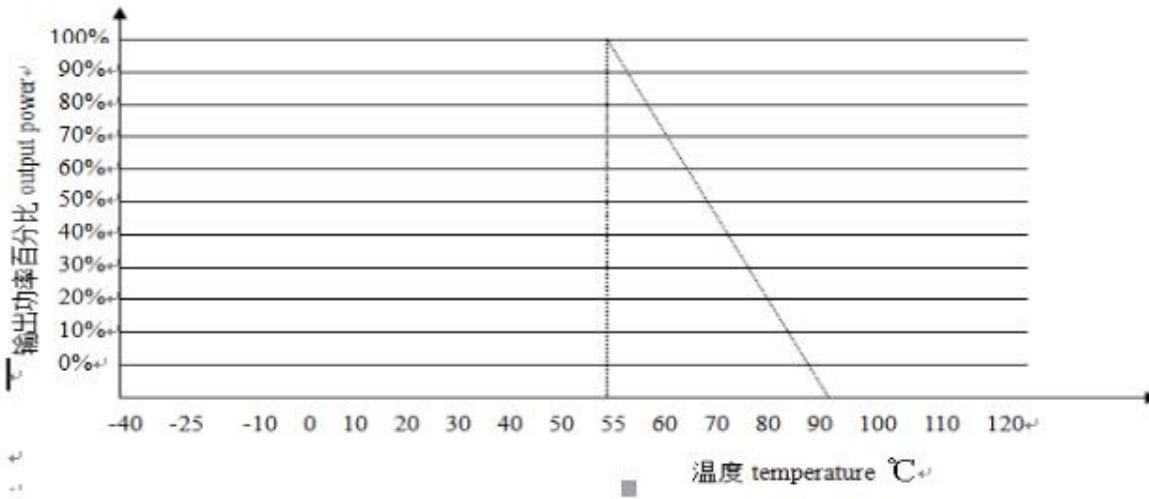
项 目 subject	条 件 conditions	本系列现有常规型号（可按客户要求订做任何不同输出电压和电流或任何要求的产品） This range has regular model (any various of types can be made as requested by clients)					
		SM-PLG06 A-03	SM-PLG06A-05	SM-PLG06A-09	SM-PLG06A-12	SM-PLG06A-15	SM-PLG06A-24
一、输入特性 input features							
交流输入(VAC)AC input	85-264						
直流输入(VDC)DC input	110-370						
频率范围 (Hz)frequency range	47-63						
输入电流 Input current (mA)	0.5/115VAC 0.25/230VAC						
浪涌电流 Surge current (mA)	冷启动 cold boot: 10A/230VAC						
效率 frequency (TYP.)	61	70	74	75	76	75	
待机功耗 stand-by consumption((mW)	≤150mW/220VAC						
二、输出特性 output features							
输出电压 output voltage (VDC)	3.3V	5V	9V	12V	15V	24V	
输出电压精度 output voltage accuracy	±1%						
额定电流 rated current (ADC)	1.2A	1A	0.6A	0.5A	0.4A	0.25A	
额定功率 rated frequency(W)	4W	5W	6W	6W	6W	6W	
纹波与噪声 ripple and noise (mvp-p)	额定输入电压 rated input voltage , 20MHz 带宽 broad band	≤100mV			≤50mV		
线性调整率 linear adjustment rate	满 载 fulled loaded	±1%					
负载调整率 Negative adjustment rate	10-100%负载 load	±3%					
启动、上升时间 time of pulse-on and rising	满载 fulled loaded	2000ms, 30ms/115VAC		1000ms, 30ms/230VAC			
保持时间 retention time (ms)	满载 fulled loaded	16ms/115VAC 50ms/230VAC					
过载保 护 overload protection	额定输入电压 rated input voltage	额定输出功率的 115%-150% account for115%-150% rated output prequency 保护模式: 恒功率模式, 负载异常条件异常移除后可自动回复 Protected mode:burping mode, replying automatically after the overloading problems have been removed					
短路保 护 short-circuit protection	额定输入电压 rated input voltage	不可长期短路, 自恢复 No long time short circuit ,self recovery					
过流保 护 over-current protection		≥1.1 倍 Io					
启动延迟持时间 period of start-up delay (ms)	Vin:230VAC	500ms					

掉电保持时间 period of power off protection (ms)		20ms
三、一般特性 General features		
工作温度 working temperature(°C)	/	-30-70
工作湿度 working humidity(RH)	/	20-90%, 无冷凝 no condensation
温漂系数 temperature drift number	/	±0.02%/°C
存储温度与湿度 storage temperature and humidity		-40~+85°C 10-95%RH
开关频率 switching frequency(KHz)		60
绝缘耐压 insulation voltage(VC)	输入对输出, 测试 Input to output test 60s, ≤5mA	2000
绝缘电阻 (MΩ) Insulation resistance(MΩ)	输入对输出 Input to output 500VDC	100
泄漏电流 Leakage current(mA)	500VDC	输入对输出 Input to output ≤1mA/RMS 值
MTBF	@25°C	215000h
安全等级 Security classification	/	适应: CLASS B
耐振动 vibration resistance	/	10—500Hz 2G 10 分钟 mins /周期.cycle X、Y、Z 各 60 分钟 60 mins separately
电磁兼容 electromagnetic compatibility	/	适应 adaption : EN55022(CISPR22) Class B EN61000-3-2,-3
备注 Remarks	<p>1. 除特别说明外, 本规格书之参数均在输入 230VAC、额定负载、25°C 环境温度时进行测量。 Under the situation of no special instructions , All specification parameters should be tested within the range of 230VAC ,rated loading ,25°C</p> <p>2. 纹波和噪声测量方法: 使用一条 12 " 双绞线, 同时终端要并联 0.1uF 和 47uF 的电容, 在 20MHz 带宽时进行测量。。Measure of ripple and noise: use one 12 " twisted-pair,meanwhile Terminal should be paralleled to 0.1uF and 47uF capacitance tested with 20MHz</p> <p>3 精度: 包含舍得误差、线性调整率和负载调整率。 Accuracy: concatenation error , linear adjustment rate and load regulation rate</p> <p>4. 电源应视为系统内元件的一部分, 需结合终端设备进行电磁兼容相关确认。 Current source should be taken as one part of system element, EMC related validation should be carried out in combination with terminal equipment</p> <p>5. 低输入电压下需减额输出, 具体请参照减额曲线图。 Reducing output at low input voltage, please refer to the chart for details .</p>	

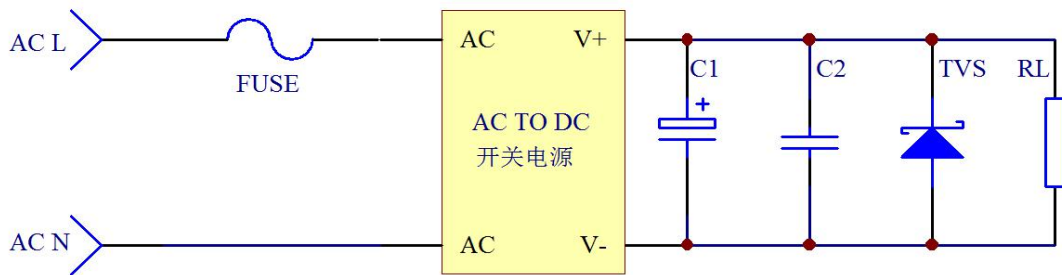
产品性能曲线图 Product function curve



工作环境温度与负载特征 Working environment temperature and load features :



① 典型应用电路: Typical application circuit



输入部分: input part

原件位号/推荐器件 original number	作用 function	推荐值 recommendation value
FUSE/保险管 FUSE protective tube	本产品异常时, 保护电路免于收到伤害 Protect the circuit from damaging	0.5A/250VAC,慢熔断 slow fuse

输出部分： output part

输出电压 output voltage	C1	C2	TVS
3.3V	47uF/25V	1uF/50V	SMBJ5.0A
5V			SMBJ7.0A
9V	22uF/50V		SMBJ12.0A
12V			SMBJ15.0A
24V			SMBJ28.0A

备注： remarks

● C1:连接/耦合滤波电解电容，建议使用高频低阻电容。电容耐压降额大于 75%，去除连接器带来的噪声。

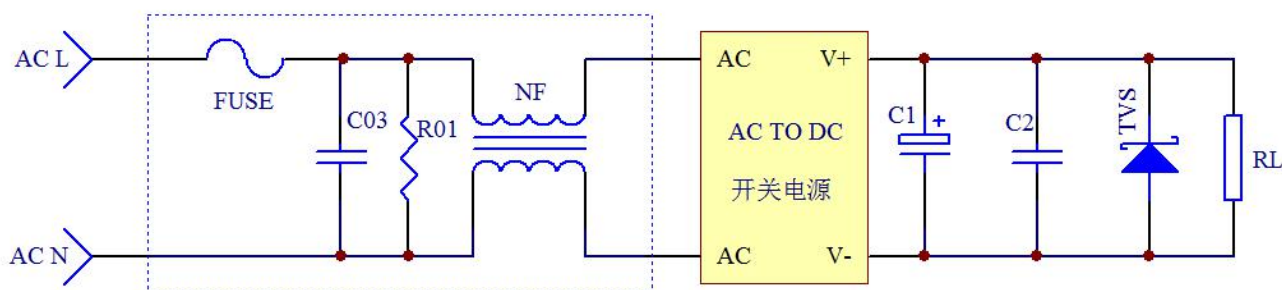
Connected filtering electrolytic capacitors, high frequency low resistance capacitors are recommended. The rated capacitance voltage is above 75%removing the noise from the connector.

● C2: 去除高频噪声的陶瓷电容。 **Removing High Frequency noise created by Ceramic Capacitor**

● TVS:在电源异常时保护后级电路，建议使用。**Severing the purpose of protecting the rear stage circuit when the power supply is abnormal, it is recommended to use**

② EMC 解决方案-----推荐电路

Solving method----- recommended circuit

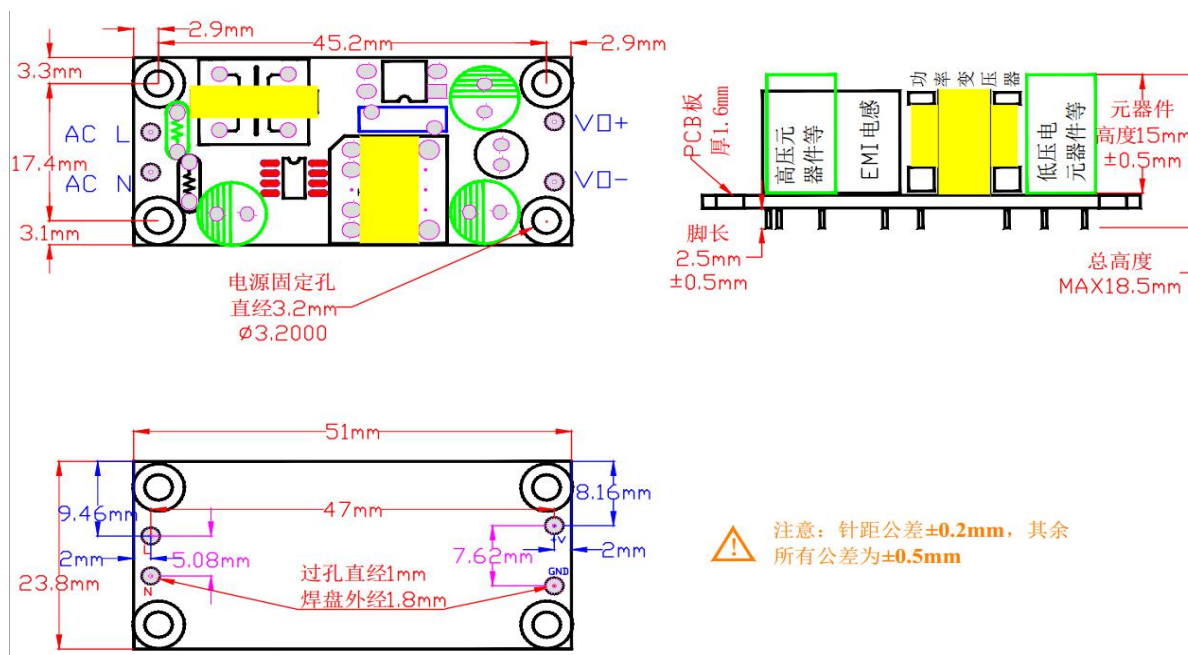


输入部分：

原件位号/推荐器件 recommended device	作用 function	推荐值 recommendation value
FUSE/保险管 protective tube	电源异常时，保护电路免于收到伤害。 Protect the circuit from damaging in the situation of abnormality	0.5A/250VAC,慢熔断（必接） slow fuse (necessarily connected)
C03 : X2 电容 capacitance	抑制差模干扰。 Suppress differential mode interference	0.22uF/275VAC
R01 : 泄放电阻 leaking resistance		1MΩ 1/2W
NF:共模电感 common-mode inductance	抑制共模干扰，提高设备的抗干扰能力及系统的可靠性。 Suppress interference by common mode, improving the anti-interference ability and reliability of the system	10 mH -30 mH

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产品封装与引脚定义图 Product package and pin definition diagram



Product selections and precautions

1. Please refer to the specifications of performance parameters index while using otherwise it will not guarantee the reliability of the power supply .
2. All the specifications of performance parameters index are being tested according to the internal standards of our company.
3. Highly suggest that the loading frequency do not exceed 80% of the power rated frequency while using
4. Using a power supply with multiple outputs, each output must be loaded at a corresponding rate
5. We can offer product customization service .
6. Any changes in product specifications are to be no further notice
7. Please log in our website :www.sanmim.com for more product information

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