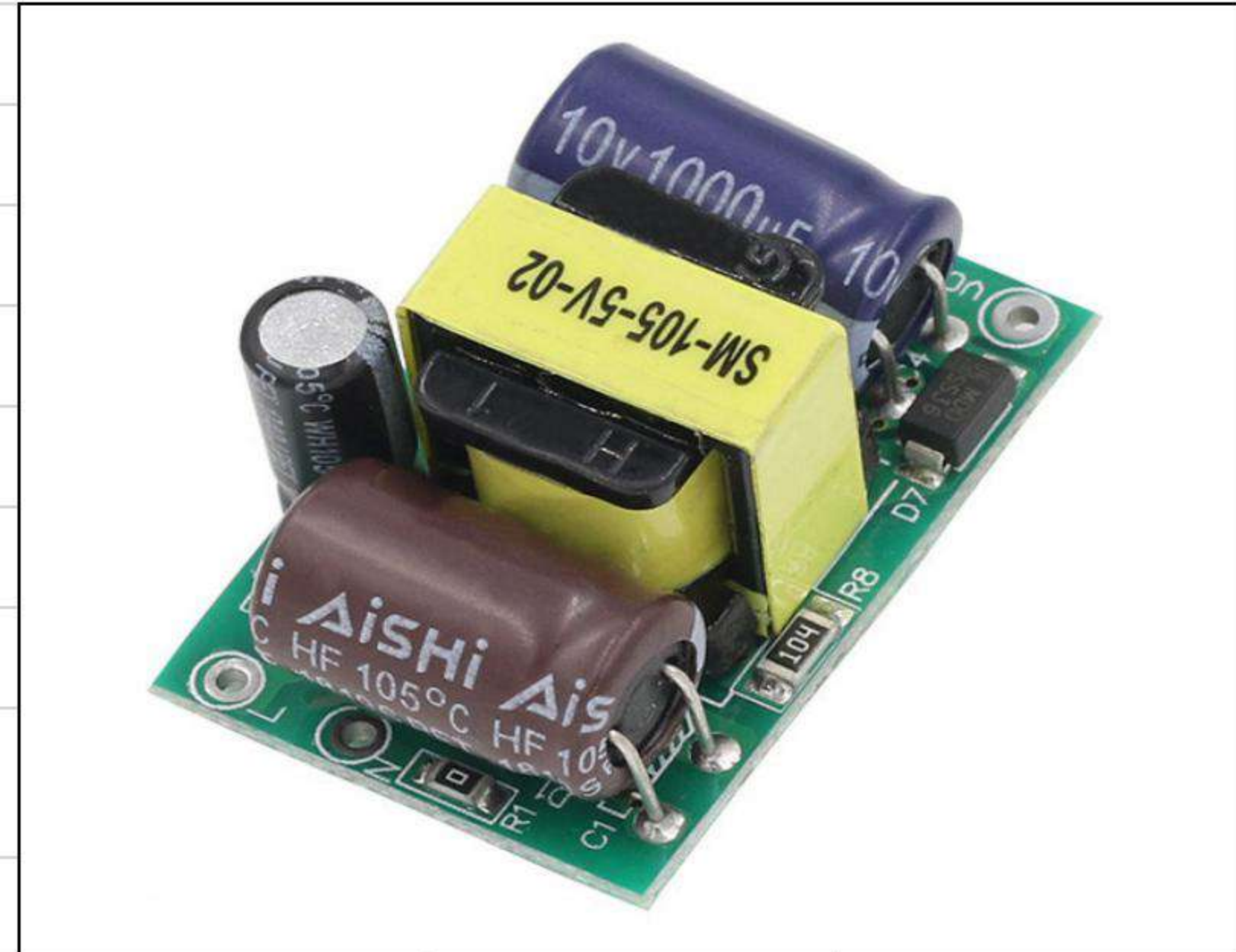


Product Features:

- 1.The product is easy to install and can be directly used on the motherboard with inserting needles.
- 2.Itemational Universal input voltage: 85-264V AC or 110-370VDC.
- 3.High efficiency, high power density, high accuracy of output voltage.
- 4.High isolation between input and output.
- 5.Overcurrent protection, short circuit protection and temperature protection.
- 6.The output has built-in filter and can be used without external filter circuit.
- 7.SM-PLA03B series output can be added three-terminal regulator model: AMS1117 3.3V/5V to achieve dual output, three-terminal regulator package SOT-223, dual output interface with V2 to common GND.
- 8.Three years of quality assurance



Item	Condition	Common models of this series we have (we can customize any products with different output voltage and current or other requirements according to customer's requirements)					
		PLA05C-03V	PLA05C-05V	PLA05C-09V	PLA05C-12V	PLA05C-15V	PLA05C-24V

1、 Input Features

AC Input(VAC)	85-264VAC					
DC Input(VDC)	110-370VDC					
Frequency Range(Hz)	47-63Hz					
Input Current(A)	0.5/115VAC 0.25/230VAC					
Surge current(A)	Cold Boot: 10A/230VAC					
Efficiency(TYP.)	61%	69%	76%	76%	77%	77%
Stand-by power consumption(mW)	≤150mW/230VAC					

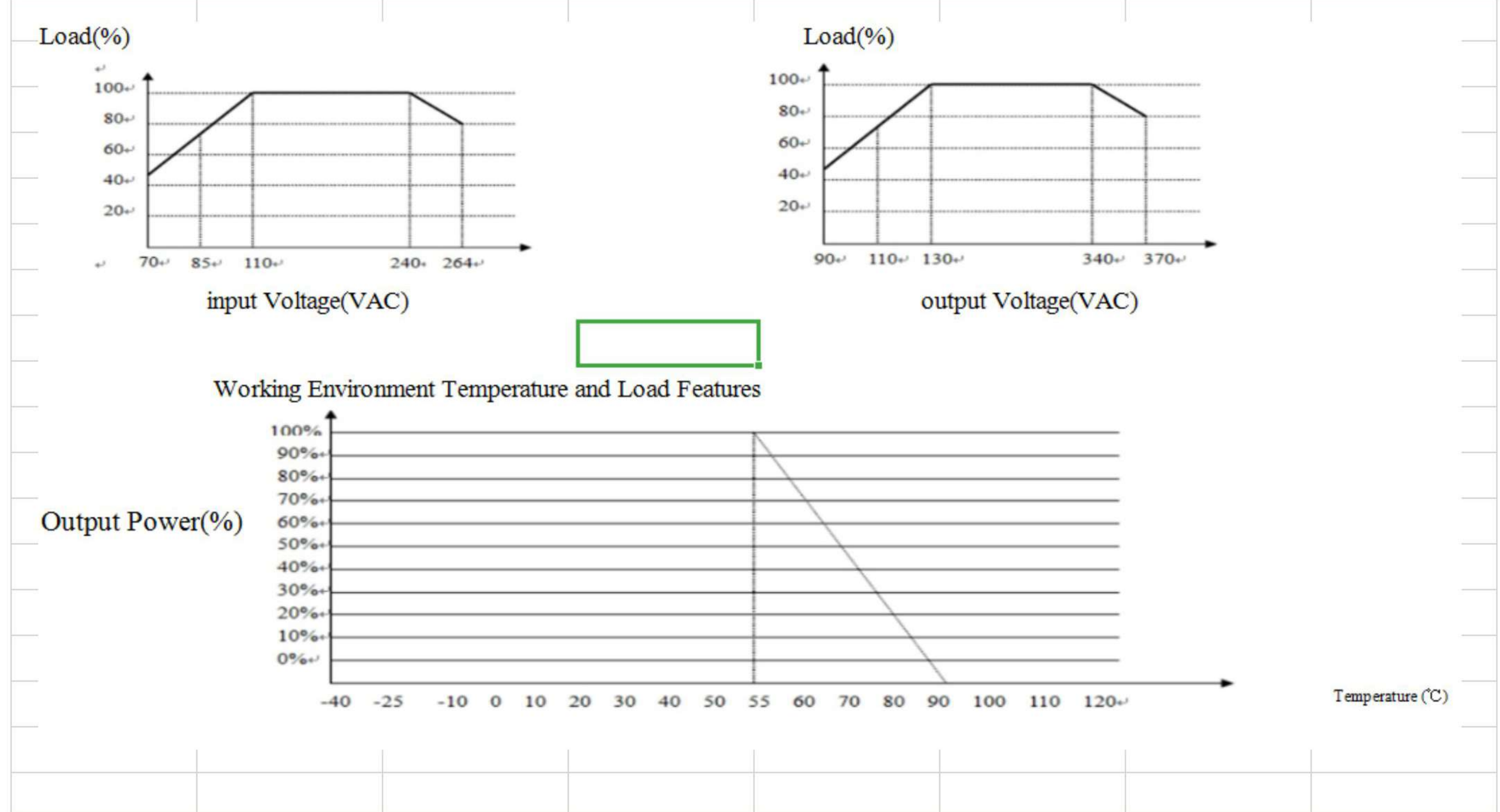
2、 Output Features

Output Voltage(VDC)	3.3V	5V	9V	12V	15V	24V
Output voltage accuracy	±1%					
Rated current(ADC)	1A	1A	0.6A	0.5A	0.4A	0.25A
Rated power (W)	3.3W	5W	5W	5W	5W	5W
Ripple&Noise (mvp-p)	Rated input voltage, 20MHz bandwidth	≤600mV		≤300mV		
Linear adjustment rate	Full-load	±1%				
Load regulation	10-100% Load	±3%				
Startup and rise time	Full-load	2000ms, 30ms/115VAC 1000ms, 30ms/230VAC				
Retention time(ms)	Full-load	16ms/115VAC 50ms/230VAC				
Overload protection	Rated input voltage	115%-150% of the rated output power Protection mode: hiccup mode, auto-response after removal of abnormal loading condition				
Short-circuit protection	Rated input voltage	Automatic recovery after long-term short circuit				
Over-current protection		≥1.1 Times I _o				
Start delay time(ms)	V _{in} : 230VAC	500ms				
Power-off protection time (ms)		20ms				

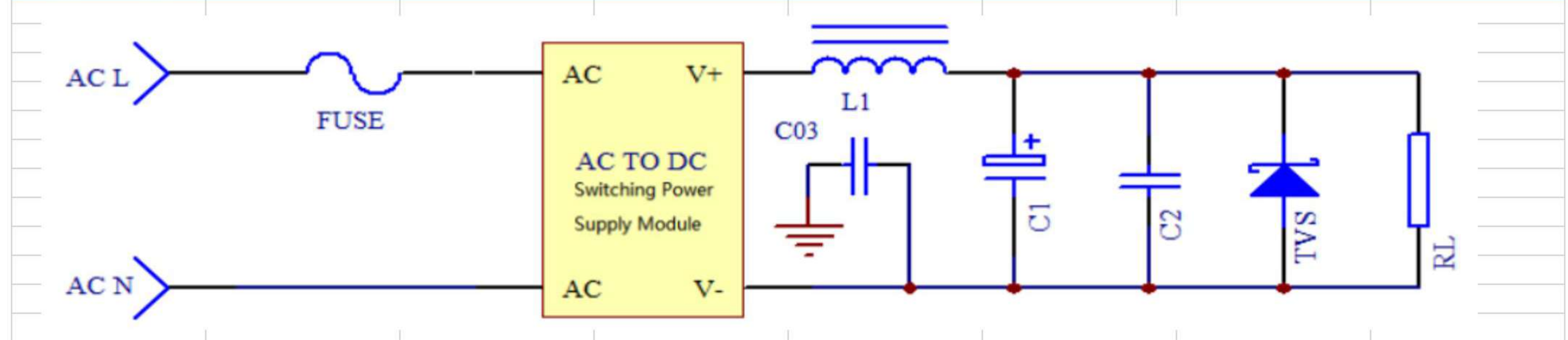
3、General Features

Working temperature(°C)	/	-30~70°C
Working humidity (RH)	/	20-90%RH, 无冷凝
Temperature drift coefficient	/	±0.02%/°C
Storage temperature and humidity		-40~+85°C 10-95%RH
Switching frequency (KHz)		5-65KHz
Isolation voltage (VAC)	Input-to-output, test lasted 60s, ≤5mA	2000VAC
Insulation resistance(MΩ)	Input-to-output, 500VDC	100MΩ
Leakage current(mA)	500VDC	Input-to-output ≤1mA/RMS
MTBF	@25°C	>215000h
Safety level	/	Adaptation: CLASS B
Vibration resistance	/	10—500Hz 2G 10 minutes/cycle. 60 minutes each for X, Y and Z.
Electro-magnetic compatibility	/	Adaptation: EN55022(CISPR22) Class B EN61000-3-2-3
Remarks	<p>1. Except for special instructions, the parameters of this specification are measured at 230VAC input, rated load and 25°C.</p> <p>2. Measurement of ripple and noise: Using a 12" twisted pair, and the terminal has two capacitors, 0.1uF and 10uF in parallel. Measured at 20MHz bandwidth.</p> <p>3. Accuracy: Including errors, linear adjustment rate and load adjustment rate.</p> <p>4. The power supply should be regarded as part of the components in the system, and electro-magnetic compatibility related confirmation should be carried out with the terminal equipment.</p> <p>5. Reduced output is required under low input voltage. Please refer to the reduction graph.</p>	

>Curves Chart For Product Features



>Typical application circuit



>Input Parts:

Original Bit Number/Recommended Device	Effects	Recommended values
FUSE	Protect the circuit from damage when the product is abnormal	0.5A/250VAC, Slow Break

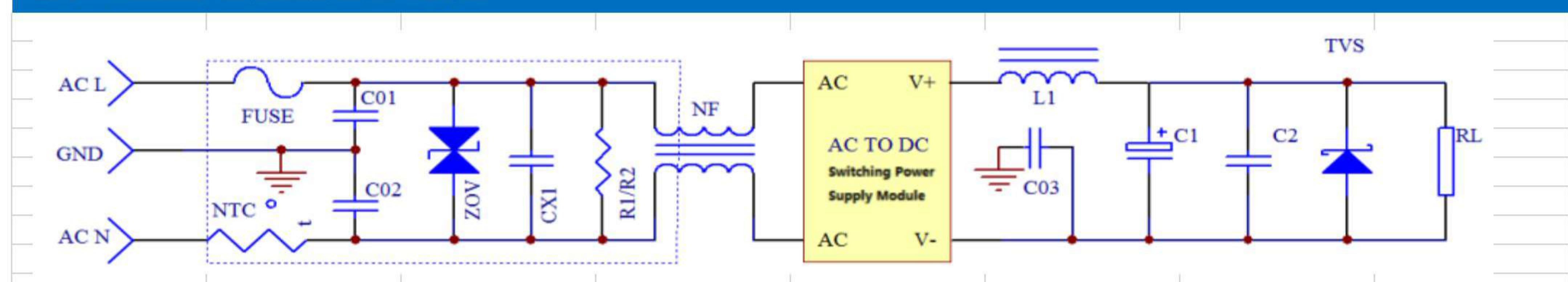
>Output Parts:

Output Voltage	C1	C2	C03	L1	TVS
3.3V	680uF/10V	1uF/50V	Y2 Capacitance 1000pF/250VAC	Inductance 8uH-15uH, Copper straight warp \geq 0.45mm	SMBJ5.0A
5V					SMBJ7.0A
9V	470uF/16V				SMBJ12A
12V	330uF/25V				SMBJ15A
15V					SMBJ18A
24V	220uF/35V				SMBJ28A

Remarks:

- C1: Connecting/coupling filter electrolytic capacitors, high frequency and low resistance capacitors are recommended. Capacitance withstand voltage drop more than 75%, remove noise caused by connectors.
- C2: Removing high frequency noise for Ceramic capacitors
- C03: Y2 security capacitor removes high-frequency noise from power grid or power supply.
- TVS: It is recommended to protect the back-stage circuit when the power supply is abnormal.

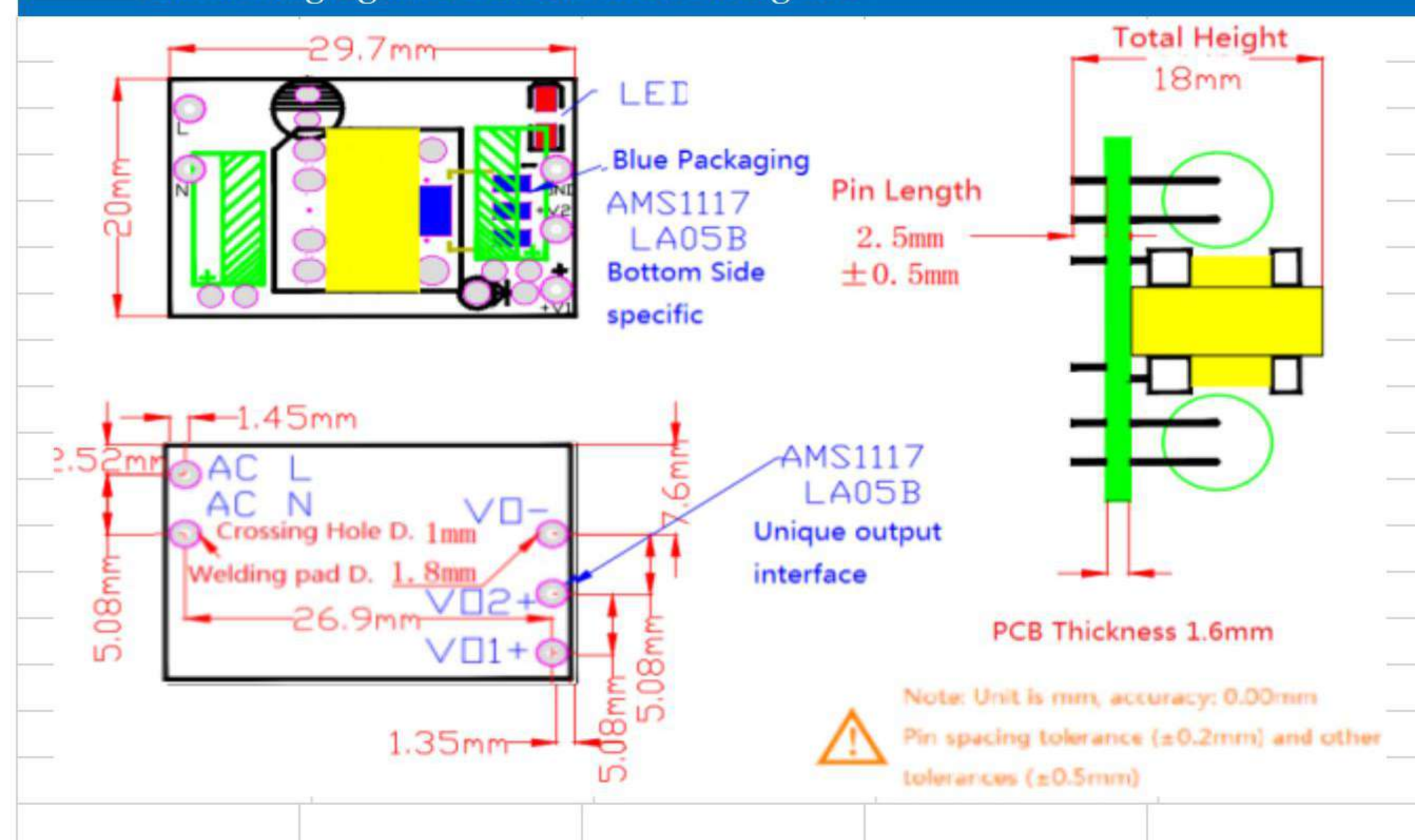
>EMC Solution--Recommended Circuit



>Input Parts:

Original Bit Number/Recommended Device	Effects	Recommended values
FUSE	When the power supply is abnormal, the protection circuit is protected from damage.	0.5A/250VAC, slow Break
NTC: Thermistor	Inhibition of surge current, protection module is not damaged.	5D-7
ZOV: Varistor	Protection module is not damaged in lightning surge.	07D471K
CX1: X2 Capacitance	Suppression of differential mode interference	0.22uF/275VAC
R1/R2: Discharge resistance		1M Ω 1/2W
C01,C02,C03: Y2 Capacitance	Common mode interference is suppressed to improve the anti-interference ability of equipment and the reliability of the system.	1000pF/250VAC
NF: Common mode inductor		10 mH -30 mH

Product Packaging and Pin Definition Diagram



Product selection and Notes:

1. Please refer to the specifications in detail for selection and use, otherwise the reliability of power supply will not be guaranteed.
2. All parameters of this specification are measured according to the internal standards of our company.
3. It is suggested that the load power of the power supply should not exceed 80% of the rated power of the power supply.
4. With multi-output power supply, each output circuit must be loaded and used at the same time according to the corresponding ratio.
5. Our company can provide customized products.
6. We reserve the right to change specifications without prior notice.
7. For more product information, please contact us or log on our website: <https://www.sanmim.com>

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