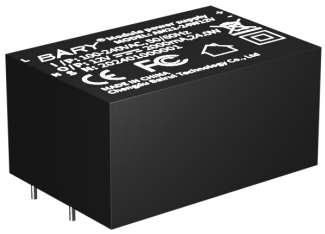
Product characteristics



- ✧ **Package type**：DIP，lead wire；
- ✧ **Temperature range**：-40℃ to +85℃；
- ✧ **Conversion efficiency**：82 ~ 87%；
- ✧ **Isolation withstand voltage**：3000VDC；
- ✧ **Input range**：85 ~ 264VAC，120 ~ 370VDC；
- ✧ **Output protection**：overcurrent and short circuit protection;
- ✧ **Application areas**：Industry, instrumentation, RF communication, rail transit, smart street lights, smart switches, smart homes.

File Version	Modify description	Release date	Maintainer
V1.0	Initial release	2019-8-23	LJ
V2.0	Modify parameters and optimize circuit parameters	2020-7-18	LJ
V2.43	Modify parameters and optimize circuit parameters	2022-9-15	LJ
V3.0	Modify parameters, use CLC for output filtering, and obtain CE and FCC certification version	2025-01-15	LJ

Product Selection Table

Product Model	Input voltage range	Output			efficiency (%) Min./Typ.	Maximum capacitive load (μF)	Certification
		Power (W)	Voltage (VDC)	Current (mA) Max./Min			
AM21-20W05V	85~264VAC 120~370VDC	20	5	4000	82	4700	CE+FCC EN 62368-1
AM21-20W09V			9	2222	83	4700	
AM21-24W12V		24	12	2000	85	3300	
AM21-24W15V			15	1600	85	3300	
AM21-24W24V			24	1000	87	2200	

*Note: CE, FCC product certification Input voltage range: 100~240VAC

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Input Parameters

Item	Operating conditions	Minimum value	Typical value	Maximum value	Unit
Input voltage range	AC Input	85	--	264	Vac
	DC input	119	--	370	Vdc
Input frequency	AC Input	47	--	63	Hz
Input Current	AC input (220VAC/50Hz)	--	222	--	mA
Boot time		--	800	1500	ms
Inrush Current	AC Input	--	20	--	A
Input filter type	AM21-24W-V	LC			
External fuse	3.15 A/ 250V AC , slow break, must be connected.				

Output Parameters

Item	Operating conditions	Minimum value	Typical value	Maximum value	Unit
Output voltage accuracy	AM21-24W-V	--	± 1.0	± 1.5	%
Voltage Regulation	Fully loaded	--	± 0.25	± 0.5	%
Load Regulation	10%~100% load	--	± 1.0	± 2	%
Ripple Noise	20MHz bandwidth , 100% load	--	--	60	mV
Temperature Drift Coefficient	Fully loaded	--	--	± 0.05	%/ ℃
Short circuit protection	AM21-24W-V	Sustainable, self-recovery			
Overcurrent protection		110~150% Io self-recovery			
Minimum load		0	--	--	%
Output filter type	CLC				

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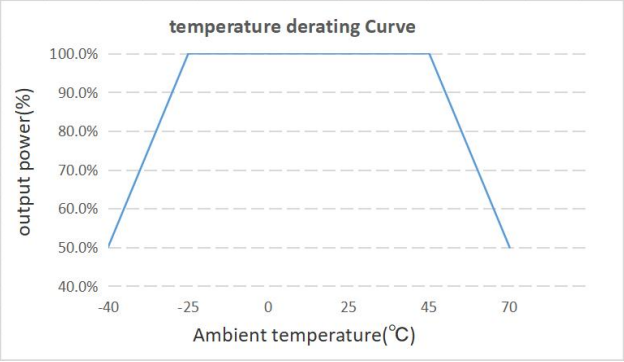
General Features

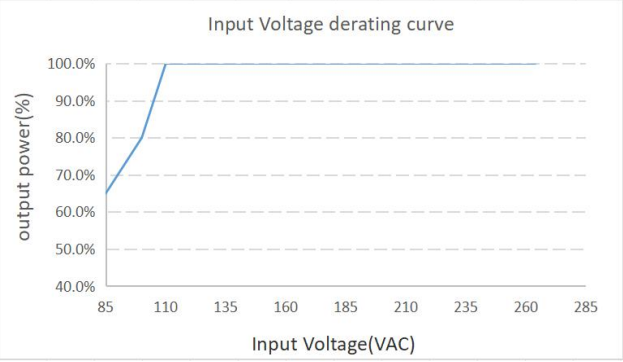
Item	Operating conditions	Minimum value	Typical value	Maximum value	Unit
Insulation withstand voltage	Input - Output	3000	--	--	Vac
Operating temperature	AM21-24W-V	-40	25	+55	℃
Storage temperature		-40	25	+85	℃
Operating humidity		--	--	95	%RH
Soldering temperature	Wave soldering	260 ± 5℃; time: 5-10s			
	Manual welding	360 ± 10℃; time: 3-5s			
Switching frequency	AM21-24W-V	--	65	72	KHz
Mean time between failures	MIL-HDBK-217F@25°C > 200,000 h				

Mechanical specifications

Housing Material		Flame retardant and heat resistant
Dimensions	AM21-24W-V	52.5*35.2*25.6mm
Product Weight		57g (Typ.)
Cooling method		Natural cooling

Product characteristic curve

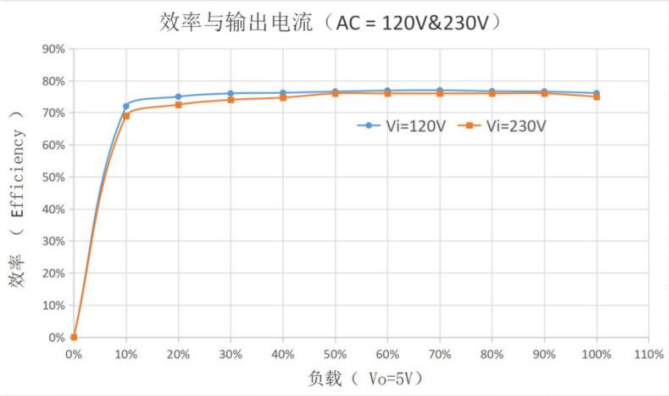


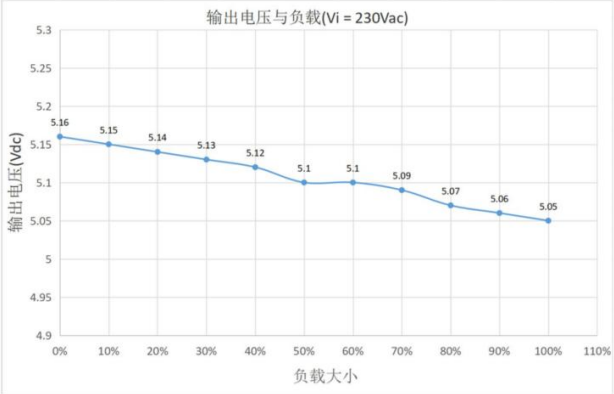


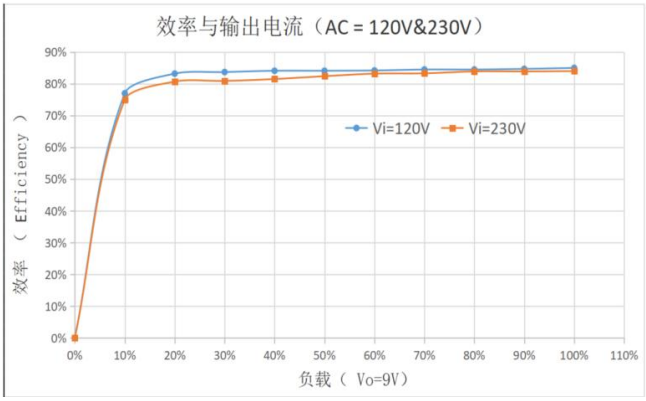
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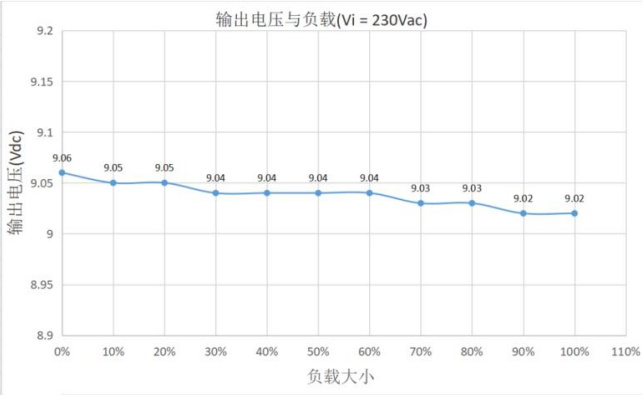
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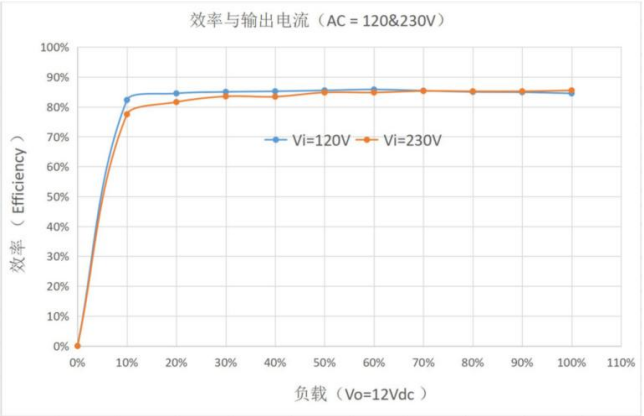
Conversion efficiency and load

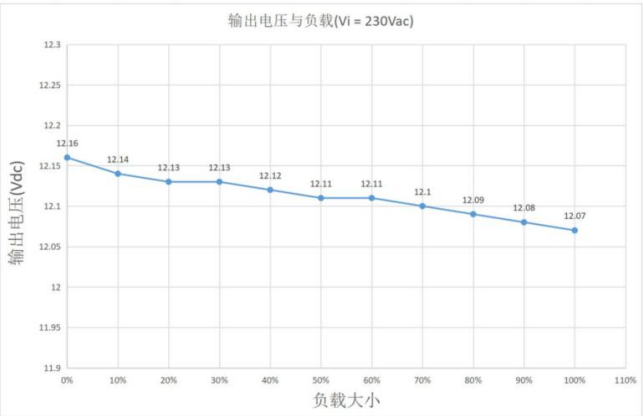






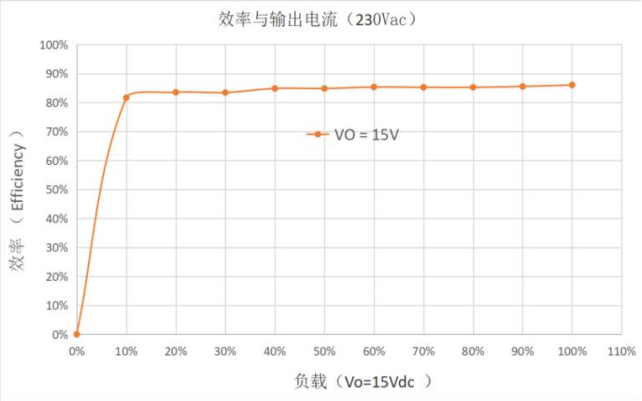


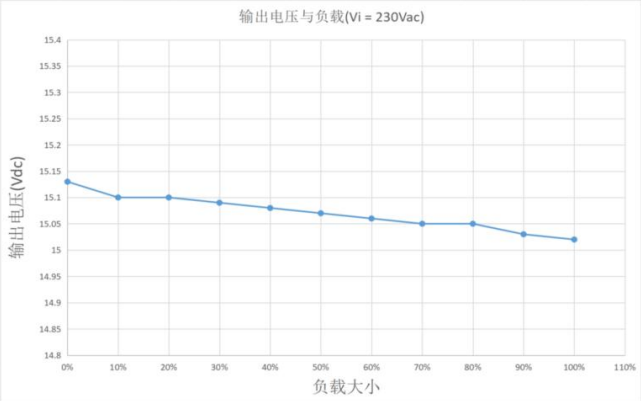


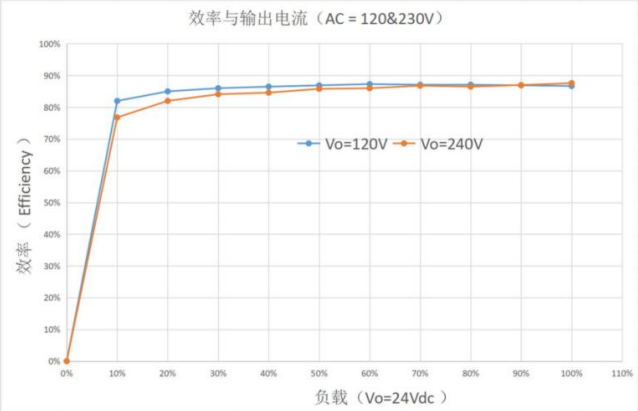


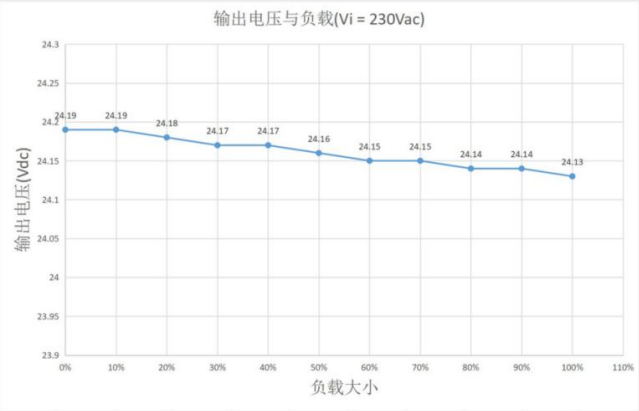
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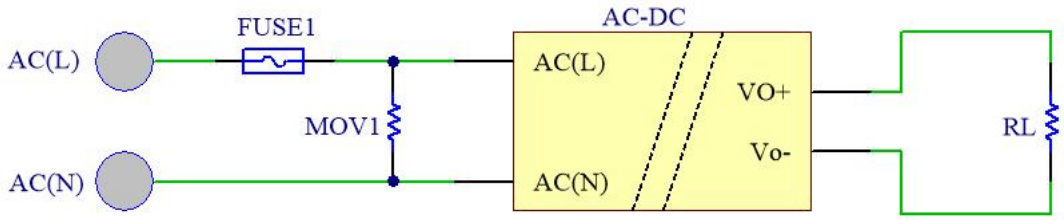






Reference Design

Typical application design

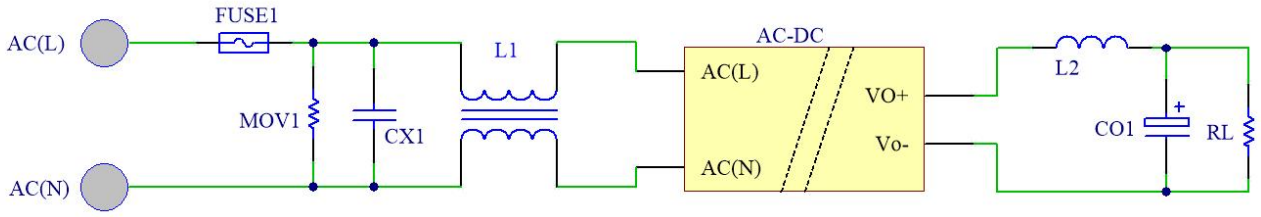


FUSE1	MOV1
3.15A/250VAC slow break, must be connected	10D 431K

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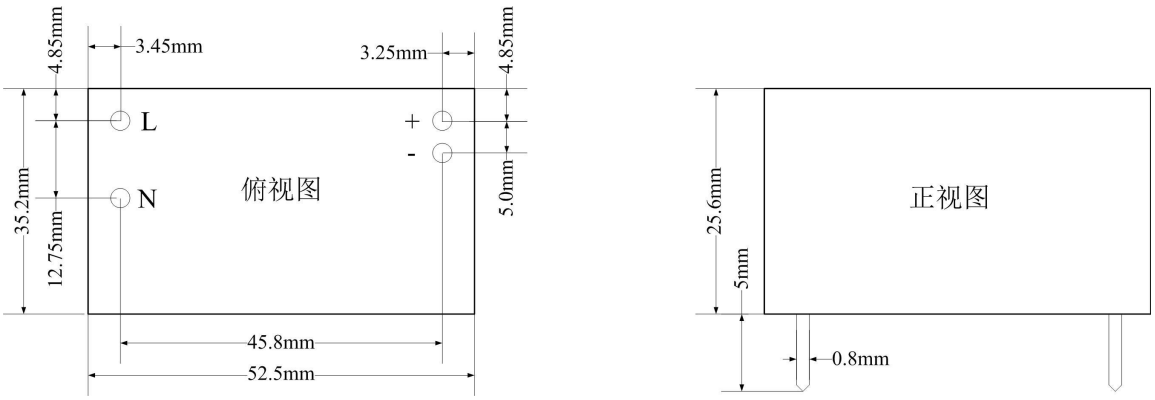
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EMC recommended circuit design



FUSE1	MOV1	CX1	L1	L2	CO1
3.15A/250V slow break, must be connected	10D 431K	0.1uF/250V	UU9.8 - 10mH	NC	NC

Product Dimensions



Note:

Pin diameter tolerances: ± 0.1mm

General tolerances: ± 0.5mm

PIN	Note
L	AC_L AC input_live wire
N	AC_N AC input_neutral line
+	+DC DC output positive pole
-	-DC DC output reference ground

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