Product characteristics

- ✧ Package outline：DIP，lead wire；
- ✧ Temperature range：-40℃ to +85℃；
- ✧ Efficiency：73 ~ 88%；
- ✧ Isolation Voltage：3000VAC；
- ✧ Input range：85 ~ 450VAC，120 ~ 630VDC；
- ✧ Output protection：current limit 、short circuit；
- ✧ application area：industry、Instrumentation、RF communication、track、traffic、Smart Street Lamp、Smart Home、Intelligent switch、Smart Home.



Selection Guide

Product model	Input Voltage	Output			Efficiency(%) Min./Typ.	Max capacitive load（μF）
		Power（W）	Voltage（VDC）	current（mA） Max./Min		
AM31-15W05V	85~450VAC 120~630VDC	15	5	3000	79	4700
AM31-20W09V		20	9	1330	83	4700
AM31-24W12V		24	12	2000	85	3300
AM31-24W15V			15	1600	86	3000
AM31-24W24V			24	1000	88	2200

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage range	AC Input	85	380	450	Vac
	DC Input	119	532	630	Vdc
Input frequency	AC Input	47	--	63	Hz
Input current(532VDC)	AM31-15W05V	--	34.0	--	mA
	AM31-24W12V	--	53.7	--	
	AM31-24W24V	--	52.4	--	
Start up time(532VDC)		--	800	1500	ms
Inrush Current	380VAC	--	10	--	A
Input filter Typ		LC			
Recommended External Input Fuse		3A/500V, slow-blow, required			

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Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy	--	--	--	±1.0	±1.5	%
Line Regulation	Full load	--	--	±0.25	±0.5	%
Load Regulation	10%~100% Load(balanced load)	AM31-12W(V/C)	--	±1.0	±2	%
Ripple & Noise	20MHz bandwidth (peak-to-peak value)	AM31-12W(V/C)	--	80	100	mV
Temperature Coefficient	--	--	--	±0.05	--	%/℃
Short Circuit Protection	--	--	Continuous, self-recovery			
Over current current	--		110~150% Io self-recovery			
Min. Load	--	--	0	--	--	%
Output filter Typ	CLC					

General Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Isolation Voltage	Input - output		3000	--	--	Vac
operating Temperature			-40	25	+55	℃
storage Temperature			-40	25	+85	
storage Humidity			--	--	95	%RH
soldering Temperature	Wave-soldering		260 ± 5℃; time：5-10s			
	Manual welding		360 ± 10℃; tim：3-5s			
Switching Frequency			--	65	72	KHz
MTBF			MIL-HDBK-217F@25°C > 200,000 h			

Mechanical Specifications

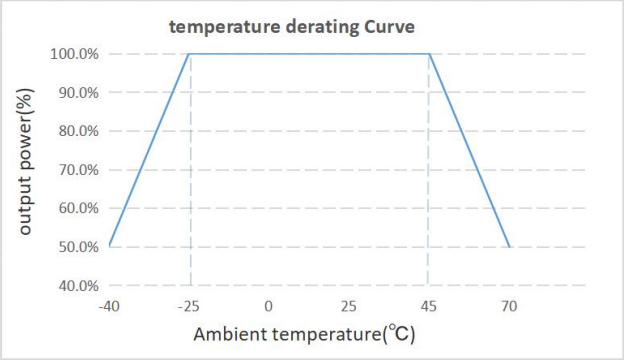
Case Material		flame-retardant and heat-resistant
size	AM31-24W-V	52.5*35.2*25.6mm

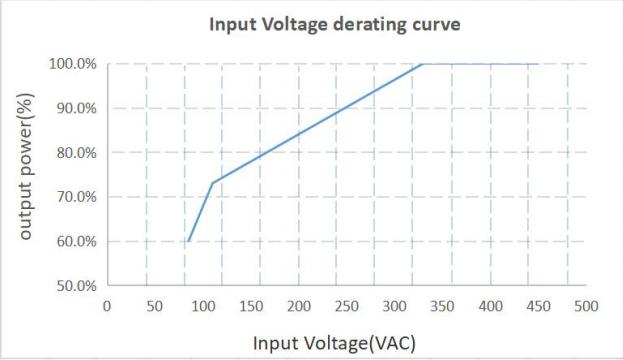
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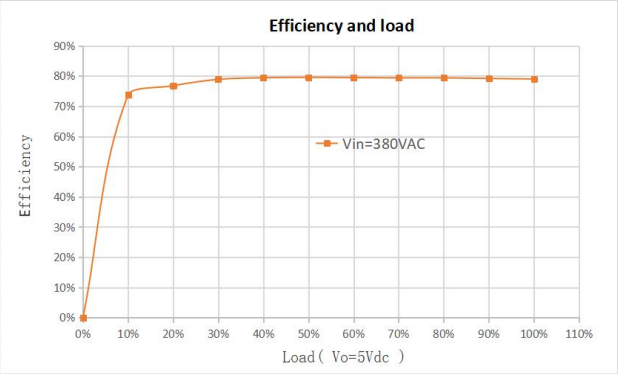
Weight		55g(Typ.)
Cooling method		Free air convection

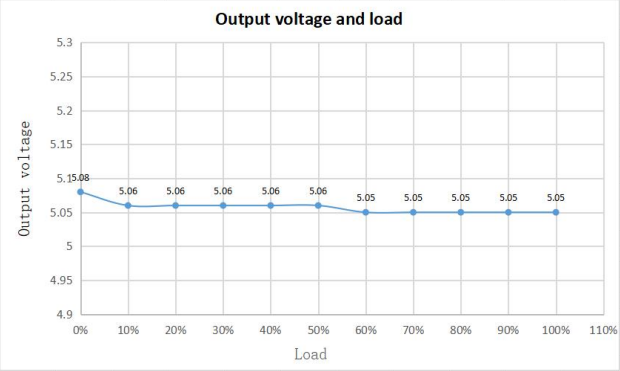
Product Characteristic Curve

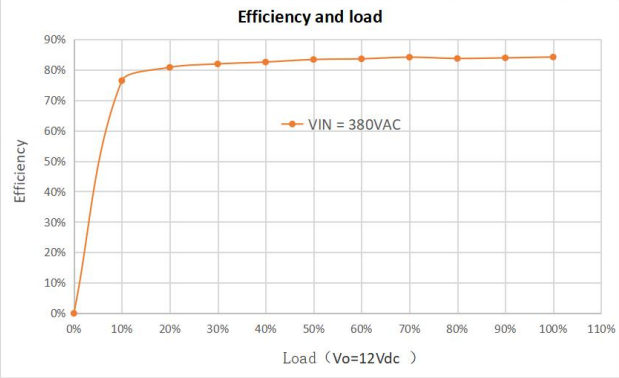


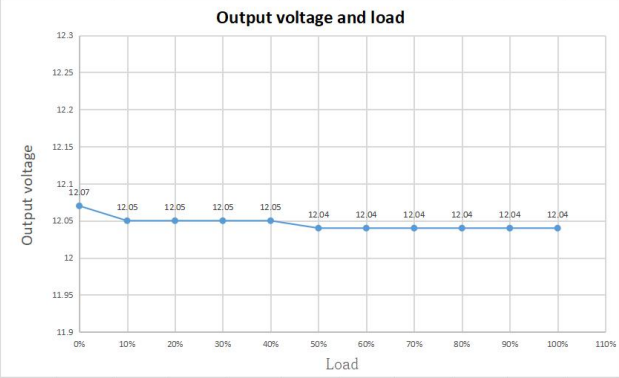


Efficiency vs load



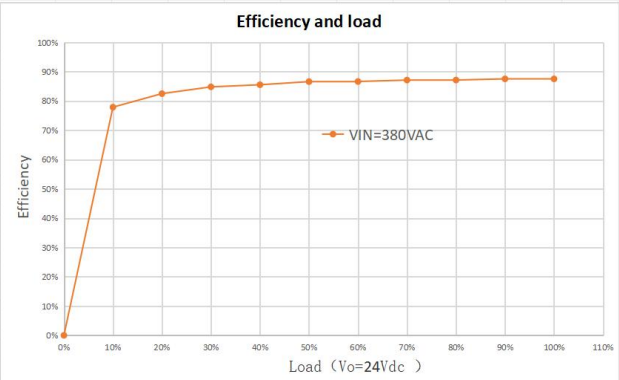


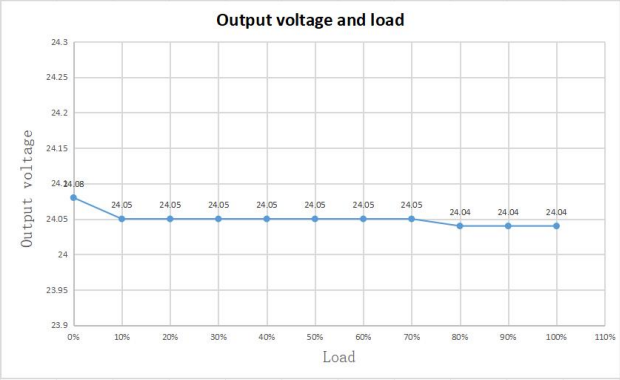




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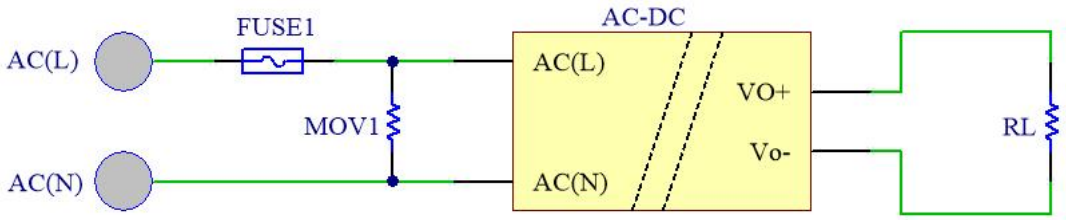
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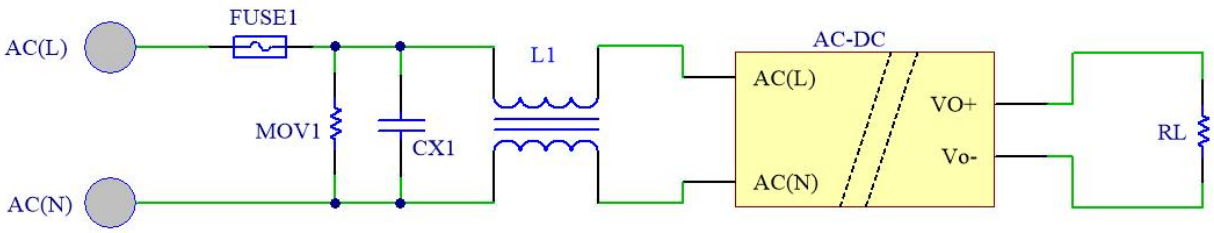
Design Reference

Typical application circuit



FUSE1	MOV1
3A/500V Slow-blow, required	10D 821K

EMC compliance recommended circuit

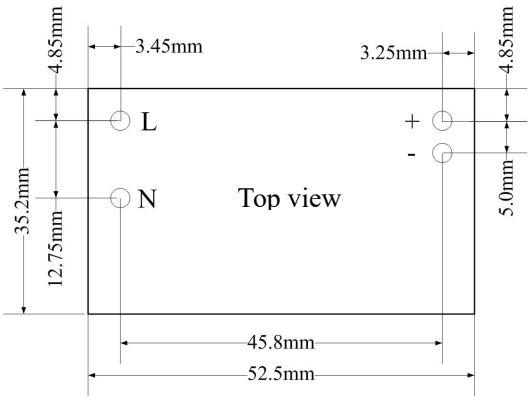


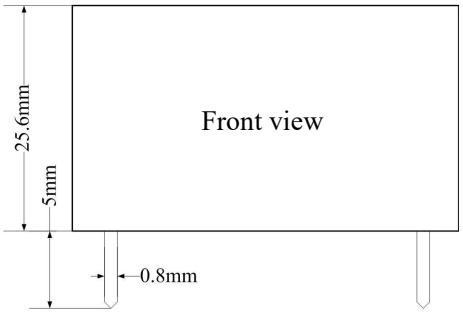
FUSE1	MOV1	CX1	L1
3A/500V Slow-blow, required	10D 821K	NC	UU9.8-10mH

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Dimensions and Recommended Layout





Note:

Pin diameter tolerances:±0.1mm

General tolerances:±0.5mm

PIN	Note
L	AC_L Input Voltage
N	AC_N Input Voltage
+	+DC Output Voltage
-	-DC Output Voltage GND

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