Features

- Wide input 85-308VAC/120-430VDC
- DIP package
- Operating temperature range: -40°C～+85°C
- Isolation 2500VAC 5mA 1Minute
- Internal SMD design
- High flame retardant plastic shell package
- Natural cooling
- It has good shielding anti-interference performance and electromagnetic compatibility, lightning protection, output over current, short circuit protection, overheat protection, self-recovery and other functions

Product Picture

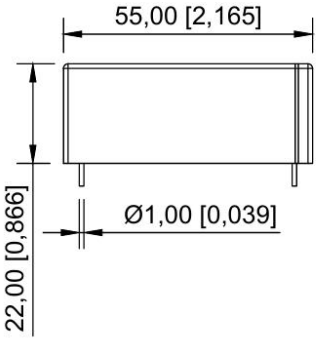
EMC-EN55032
EN55035
LVD-EN62368

3 YEARS WARRANTY

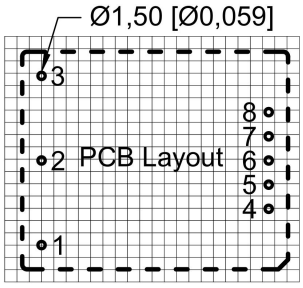
Dimensions

AC220(D)(TD)(M)__DC-15W Series Dimensions

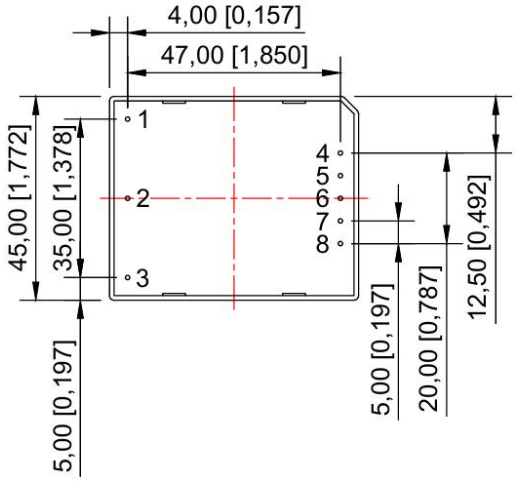
Front view



Top view



Note: The grid distance is 2.54*2.54mm



Bottom view

Pin	Dual(D)	Dual non-shared ground (TD)	Multiple (M)
1	AC(L)	AC(L)	AC(L)
2	AC(N)	AC(N)	AC(N)
3	FG	FG	FG
4	+XXVDC	+XXVDC	+XXVDC
5	No Pin	0V2	COM
6	COM	No Pin	-XXVDC
7	No Pin	+XXVDC	+XXVDC
8	-XXVDC	0V1	0V

Note:
Unit: mm[inch]
Pin section tolerance: ±0.1[±0.004]
Unmarked tolerance: ±0.25[±0.01]
The device layout is for reference only.

Application

Industrial control and remote DC power supply system, switching system, AC/DC(5V products), railway communication, communication interface converter, cellular telephone, semiconductor laser, display screen, monitoring equipment, petrochemical, portable instrument, medical instrument, automatic control device, burglar alarm, handheld instrument, digital circuit, IC card meter, air conditioning computer controller, LED production Products, digital products, power adapters, etc.

Selection Guide

Model	Vin (V)	Vout (V±2%)	Full Load Output Current (mA)	Efficiency (%)	Isolation (VAC)
AC220D05DC-15W	85-308VAC (120-430VDC)	±5	±1500	⩾78	2500
AC220D09DC-15W		±9	±833	⩾80	2500
AC220D12DC-15W		±12	±625	⩾81	2500
AC220D15DC-15W		±15	±500	⩾81	2500
AC220D24DC-15W		±24	±316	⩾81	2500
AC220TD0505DC-15W		5 5	Customized	⩾78	2500
AC220TD0512DC-15W		5 12	Customized	⩾81	2500
AC220TD0524DC-15W		5 24	Customized	⩾81	2500
AC220M050505-15W		5 -5 5	Customized	⩾78	2500
AC220M051212-15W		5 -12 12	Customized	⩾80	2500
AC220M051515-15W		5 -15 15	Customized	⩾80	2500
AC220M052424-15W		5 -24 24	Customized	⩾81	2500

Note: The company for customers to customize any input and output module power supply, if you have special needs, please call our company, unless otherwise specified, input =Vi, the characteristics of the module power supply should meet the requirements of Table 1, and applicable to the full temperature range (-40°C⩽Tc⩽85°C)

Electrical Characteristics

Characteristic	Symbol	Conditions Vi ,-40°C⩽Tc⩽85 (Unless otherwise specified)	Min	Max	Unit
Output Voltage	Vo	Full load	Vo-2%	Vo+2%	V
Output Current	Iomax	—	—	P(Power)/U(Output voltage)	A
Output Ripple Voltage	Vp-p	Full load，Vi，BW=20MHz，Normal temperature	100	250	mV
Output Noise Voltage	Vp-p	Full load，Vi，BW=20MHz，Normal temperature	120	300	mV
Voltage Regulation	Sv	Vimin、Vi、Vimax，Full load	—	＜0.5%	%
Load Regulation	Si	Vi，Io=(10%~100%)Iomax	—	＜0.5%	%
Efficiency	η	Vi，Full load，Normal temperature	85	—	%
Insulation Resistance	Rl	Input and output, test voltage: 500VDC	100	—	MΩ

Mechanical Specifications

Size	55.00 x 45.00 x 22.00 mm

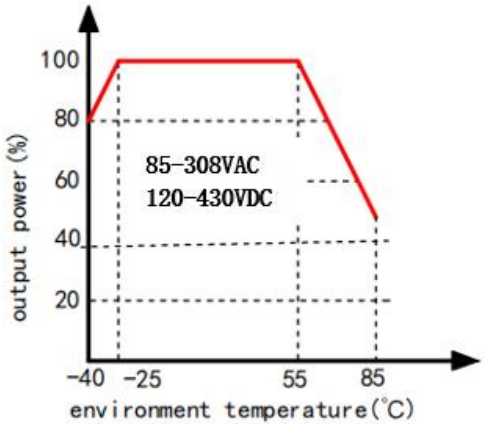
General Characteristics

EMC Specifications	Magnetic Field Sensitivity Test	GB6833.2-87

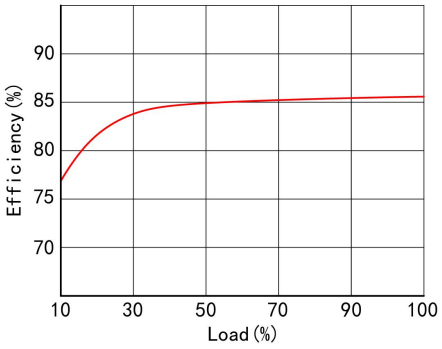
	Electrostatic Discharge Sensitivity Test	GB6833.3-87
	Radiation Sensitivity Test	GB6833.5-87
	Conduction Sensitivity Test	GB6833.6-87
Temperature Excursion	＜0.03%/°C	
Storage Temperature	-40°C~105°C	
Input Frequency	47Hz~63Hz	
Humidity	20%~95%RH	
Leakage Current	5mA(max)	
MTBF	＞500000H	

Typical Characteristic Curves

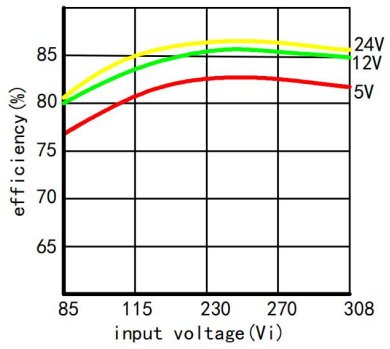
Temperature chart



Efficiency/Load graph

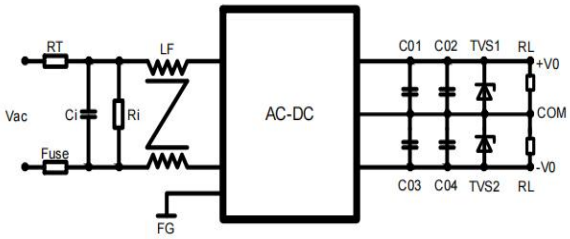


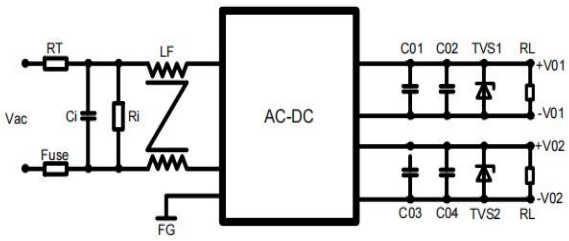
Efficiency/Input voltage graph

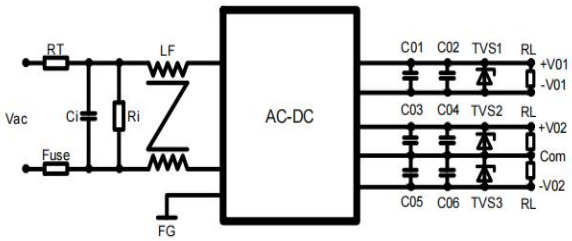


Typical Application

Design Reference







Recommendation Test

Filter: In some circuits that are sensitive to noise and ripple, the AC/DC input and output terminals can be connected with external filter capacitors to reduce the impact of ripple on the system, but the value of the filter capacitor should be appropriate, if the capacitor is too large, it is likely to cause startup problems, for each output, under the condition of ensuring safe and reliable operation, the maximum capacitance of the filter capacitor can be referred to the external capacitance table. In order to obtain very low ripple, an "LC" filter network can be connected to the input and output end of the AC/DC converter, so that the filtering effect will be better, and it should be noted that the size of the inductance value and the frequency of the "LC" filter network should be staggered from the frequency of the AC/DC module power supply to avoid mutual interference. For each output, under safe and reliable working conditions, the recommended capacitive load value is shown in Table 1.

model	FUSE	MOV	C01/C03/C05	C02(UF)	C04(UF)	C06(UF)	TVS1	TVS2	TVS3
AC220D05DC-15W	1A/250VS low break, must be connected	14D471K	0.1UF/50V	220	220	-	SMBJ7.0A	SMBJ7.0A	-
AC220D12DC-15W				120	120	-	SMBJ20A	SMBJ20A	-
AC220TD0505DC-15W				47	47	-	SMBJ7.0A	SMBJ7.0A	-
AC220TD0512DC-15W				100	47	-	SMBJ7.0A	SMBJ20A	-
AC220TD0524DC-15W				100	47	-	SMBJ7.0A	SMBJ30A	-
AC220M051212DC-15W				47	47	47	SMBJ20A	SMBJ20A	SMBJ20A

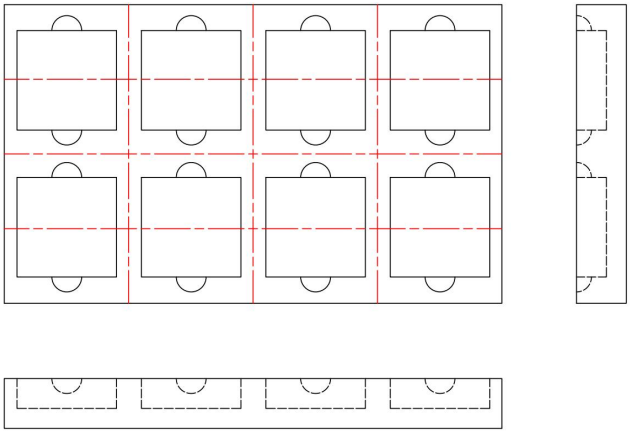
Note: Please note that the main grounding of the output and the grounding of the load are connected to the ground, so that even if the product has problems, it will not cause harm to the human body. The ground

requirements for the auxiliary roads are isolated and can be grounded without grounding.

Notice

Package

This series of modules are packed in shockproof and anti-static foam.



Transport

The package containing the module is allowed to be transported by any means of transport, which should avoid direct rain and snow and mechanical damage.

Storage

The module should be stored in a warehouse where the ambient temperature is -40 degrees ~ 105 degrees, the relative humidity is 20%~95%, and the surrounding environment is free from acidic, alkaline and other harmful gases.

Note: The above are the performance indicators of the product series listed in this manual. Some indicators of non-standard products may exceed the above requirements, so if there is any inconsistency between the manual and the product specification documents, please refer to the specification documents. If you have special needs, please contact us directly.