Features

- Wide input 85-305VAC/120-430VDC
- DIP Package
- Working Temperature: -40°C～+85°C
- Isolation 3000/4000VAC 5mA 1Minute
- Internal SMD Design
- Metal Shell Packaging
- Cooling Nature
- Good shielding and anti-interference performance, electromagnetic compatibility, lightning protection, output over current, short circuit protection, overheating protection, self recovery and other functions.

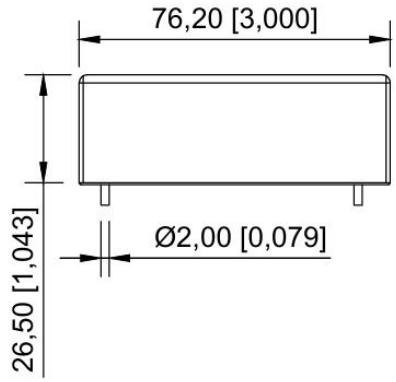
Product Picture

EMC-EN55032
EN55035
LVD-EN62368

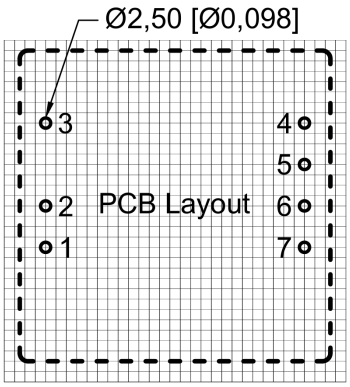
Dimensions

Dimensions of AC220S__DC-80W Series

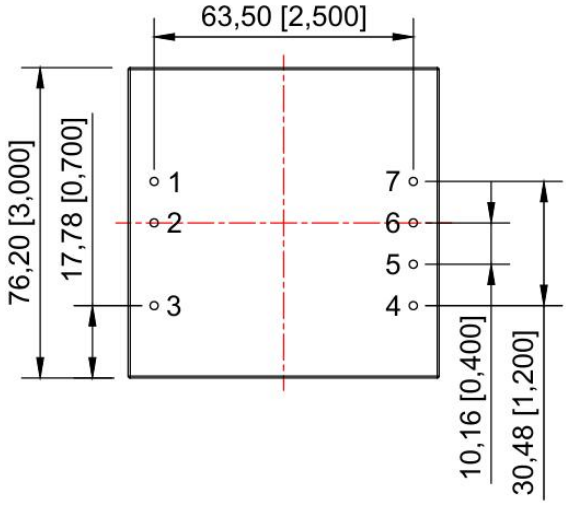
Front View



Top View



Note: The grid distance is 2.54*2.54mm



Bottom View

Pin	Function
1	AC(L)
2	AC(N)
3	FG
4	TRIM
5	+XXVDC
6	0V
7	NS

Note:
Unit: mm[inch] Pin section tolerance: ±0.10[±0.004] General tolerance: ±0.25[±0.01]
The device layout is for reference only.

Application

Industrial control and long-distance DC power supply systems, switching systems, AC/DC (5V products), railway communications, communication interface converters, cellular phones, semiconductor lasers, display screens, monitoring equipment, petrochemicals, portable instruments, medical instruments, automatic control devices, anti-theft alarms, handheld instruments, digital circuits, IC card watt-hour meters, air-conditioning computer controllers, LED products, digital products, power adapters, etc.

Selection Guide

Model	Vin (V)	Vout (V±2%)	Full Load Output Current (mA)	Efficiency (%)	Isolation (VAC)	Weight (g±0.5)	Certification
AC220S12DC-80W	85-305VAC (120-430VDC)	12	6667	⩾90	3000/4000		
AC220S15DC-80W		15	5333	⩾91	3000/4000		
AC220S24DC-80W		24	3333	⩾91	3000/4000		
AC220S48DC-80W		48	1667	⩾92	3000/4000		

Note: Our company can customize any input and output module power supply for customers. If you have special needs, please call our company. Unless otherwise specified, input = Vi. The characteristics of the module power supply should comply with the provisions of Table 1 and be applicable to the full temperature range (-40°C ⩽ Tc ⩽ 85°C)

Electrical Characteristics

Characteristics	Symbol	ConditionVi ,-40℃⩽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	80	300	mV
Output Noise Voltage	Vp-p	Full Load， Vi， BW=20MHz，Normal Temperature	100	400	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	90	—	%
Insulation Resistance	Rl	Input and output，test voltage: 500VDC	100	—	MΩ

General Characteristics

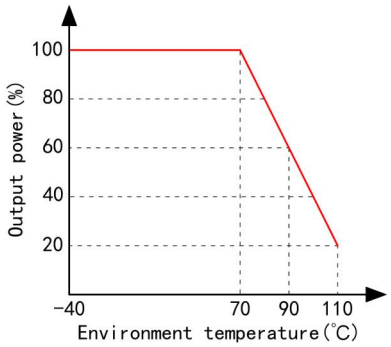
EMC Specifications	Magnetic Field Sensitivity Test Electrostatic	GB6833.2-87
	Discharge Sensitivity Test Radiation	GB6833.3-87
	Sensitivity Test	GB6833.5-87
	Conduction Sensitivity Test	GB6833.6-87
Temperature Excursion	＜0.03%/°C	
Storage Temperature	-40°C~125°C	
Switching Frequency	47Hz~63Hz	
Humidity	20%~95%RH	
Leak Current	5mA(max)	
MTBF	＞500000H	

Mechanical Specifications

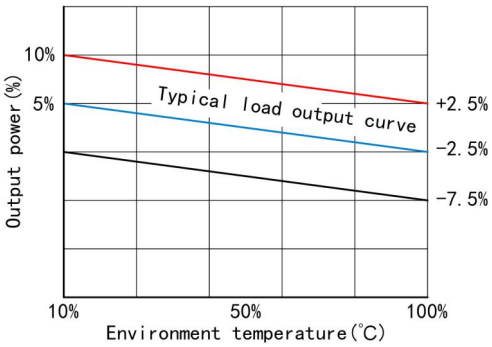
Size	76.20 x 76.20 x 27.00 mm

Typical Characteristic Curves

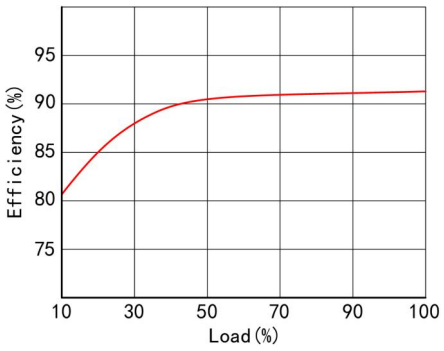
Temperature chart



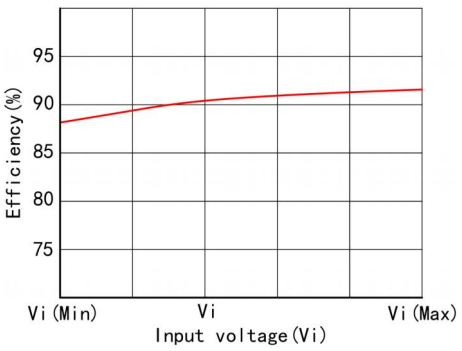
Error envelope graph



Efficiency/Load graph

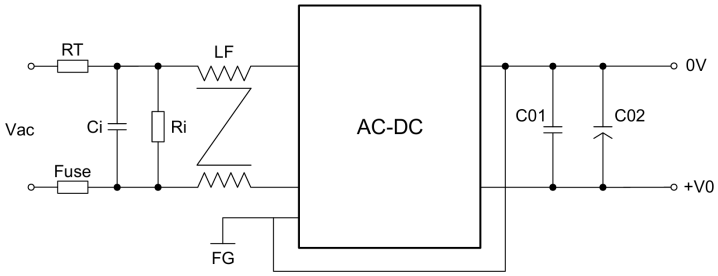


Efficiency/Input voltage graph



Typical Application

Design Reference



Recommendation Test

Filtering: In some circuits sensitive to noise and ripple, a filter capacitor can be externally connected to the input and output terminals of DC/DC to reduce ripple's impact on the system, but the value of the filter capacitance should be appropriate. If the capacitor is too large, it may cause startup problems. For each output line, under the condition of ensuring safe and reliable operation, The maximum capacity of its filtering capacitance can be referred to the external capacitance table. In order to obtain very low ripple, an "LC" filtering network can be connected to the input and output end of DC/DC converter, so that the filtering effect will be better. At the same time, it should be noted that the value of inductance and the frequency of "LC"

filtering network should be staggered from the frequency of DC/DC module power supply to avoid mutual interference. For each output line, it is recommended to see the capacitive load value (Table 1) under safe and reliable working conditions.

Input voltage (Vin+)	C01	C02	RT	Ci(UF)	Ri(KR)	LF(mH)
85-305V	104M/50V	1000uF/16V	8D-7	0.1/275V	560	8-10

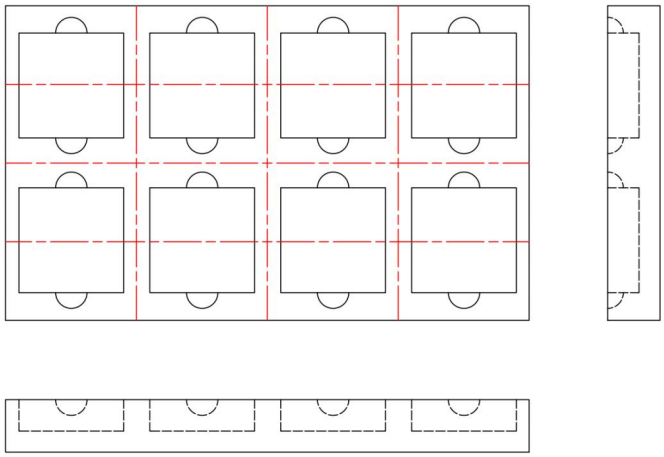
Table of recommended capacitive load values (Table 1)

Note: Please note that the grounding of the main output circuit and the grounding of the load carried should be connected to the ground, so that even if there is a problem with the product, it will not cause harm to personnel. The grounding requirement for auxiliary roads is that they are isolated and do not need to be grounded.

Notice

Package

This series of modules are packed with shockproof electrostatic foam.



Transport

The package is allowed to be transported by any means of transport, which shall avoid direct rain or snow and mechanical damage.

Storage

The module should be stored in a warehouse with an ambient temperature of -40 ° C to 125 ° C, a relative humidity of 20% to 95%, and no acidic, alkaline, or other harmful gases in the surrounding environment.

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