

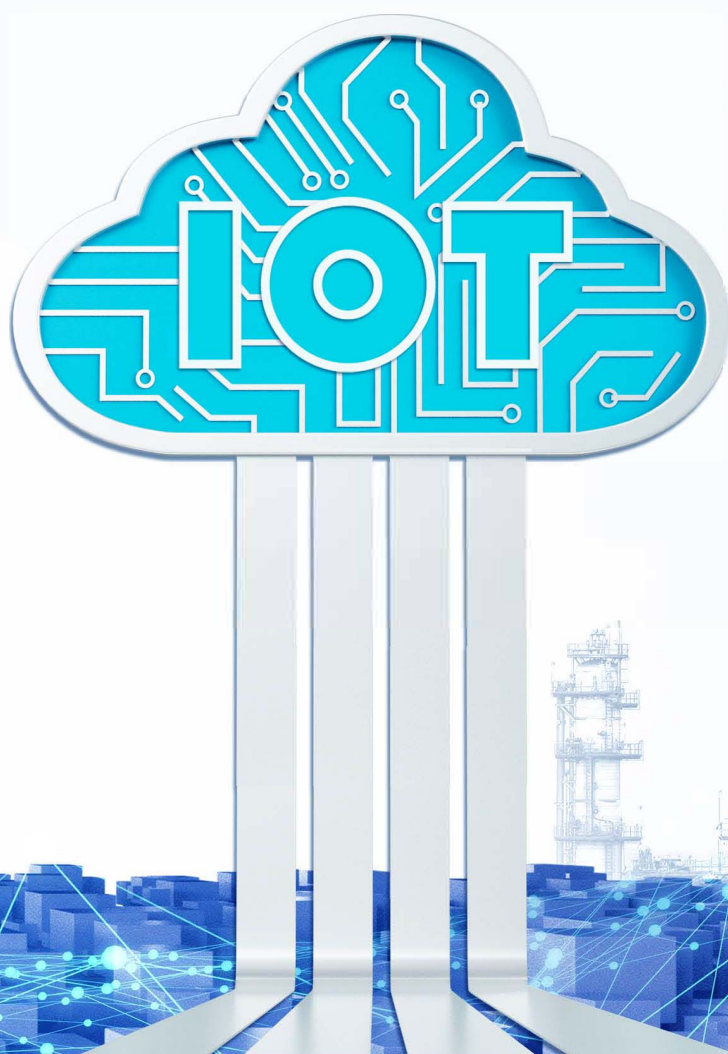
AIPULNION®

A/O版 2022/04印

AIPULNION IOT POWER SUPPLY

物联网电源

爱浦电源·九大核心技术炼造精品品质



爱浦公众号



源头工厂



敏捷定制



精密制造



国际认证



全球服务



公司简介

Company profile

广州市爱浦电子科技有限公司创立于2004年，专业从事模块电源研发、生产、销售和电源解决方案的国家高新技术企业。公司通过ISO9001:2015质量管理体系认证，遵循IATF16949的体系管控，测量管理体系认证、绿色企业认证，四星品牌企业认证。

公司拥有8000平方米现代化电子生产车间、1000平方米产品老化车间、1000平方米研发中心；同时引进先进的自动生产线、自动检测设备、自动贴片机、自动测试生产线、无铅回流焊、组装生产线、全自动老化车、专业验证实验室、异常监控设备等现代化生产设备。

随着物联网的广泛应用，模块电源的标准化程度越来越高。模块电源不但是物联网应用的基础硬件，更是物联网感知层和网络层提供需求电压的关键部件。

爱浦电子的模块电源以其可靠性和稳定性，在物联网行业中占有不错的份额。在行业应用中，针对高隔离和电磁兼容等技术，为客户提供有效的电源解决方案及更可靠的质量保障。

多年来，爱浦在AC/DC、DC/DC模块电源以及通信模块上不断探索和完善，取得了长足的进步，除了满足现有行业的客户群体的需求，也逐步把成熟的产品推向物联网行业，希望在物联网的这一领域和客户一起成长并在未来物联网行业赢得市场价值。



现代化生产车间



自动化生产设备



验证实验室



专业的研发团队



自主核心技术



全方位服务



物联网合作伙伴



目录

Catalogue

CE

RoHS

UL US

FC

隔离收发模块

型号	波特率(bps)	输入电压(Vdc)	同一网络连接节点数	工作温度(°C)	产品尺寸(mm)	页码
RS485-05HSA	500k	4.75-5.25	256	-40~+85	20.00×17.00×7.00	06

DC-DC电源模块

型号	功率(W)	输入电压(Vdc)	输出电压(V)	工作温度(°C)	产品尺寸(mm)	页码
FN1-XXSXXA	1	2.97-3.63, 4.5-5.5, 10.8-13.2	3.3, 5	-40~+85	11.50×6.00×10.00	07
FN1-05S05AN	1	4.5-5.5	5	-40~+85	11.50×6.00×10.00	08
NN1-3V3S3V3ANT	1	2.97-3.63	3.3	-50~+85	15.24×7.50×6.50	09
FN2-05S05CN	2	4.5-5.5	5	-40~+85	19.50×7.00×10.00	10
FK3-24S05E	3	18-36	5	-40~+85	22.00×9.50×12.00	11
K7805-500		6.5-32	5	-40~+85	11.60×7.50×10.20	12
FD6-18S05A3N4	6	9-36	5	-40~+85	25.40×25.40×11.00	13
FD12-36S12A3N2	12	18-75	12	-40~+85	25.40×25.40×11.00	14
FD12-36S12A3C2	12	18-75	12	-40~+85	25.40×25.40×11.00	14
FD20-18S05A3C	20	9-36	5	-40~+85	25.40×25.00×12.50	15
FD20-36S12A3	20	18-75	12	-40~+85	25.40×25.00×12.50	15

AC-DC电源模块

型号	功率(W)	输入电压(VAC/VDC)	输出电压(V)	工作温度(°C)	产品尺寸(mm)	页码
FA3-220S05A2N3	3	85-265/120-380	5V	-40~+75	37.70×18.70×13.60	16
DA3-220S05G9D4	3	85-305/120-430	5V	-40~+75	26.40×17.60×11.00	17
DA5-220S05G9D4	5	85-305/100-430	5V	-40~+75	26.40×17.60×11.00	18
FA5-220S12Y2N3	5	90-265/127-375	12V	-40~+75	50.80×25.40×15.16	19
DA10-220S05G9D4	10	85-305/120-430	5V	-40~+85	32.00×20.40×10.50	20
DA10-220S12G9N4	10	85-305/120-430	12V	-40~+75	32.00×25.80×16.00	21
FA15-220S12F2D4	15	85-265/120-380	12V	-40~+75	62.00×45.00×22.50	22
FA15-220S12F2N4	15	85-305/120-430	12V	-40~+75	62.00×45.00×22.50	23
FA25-220S12H2D4	25	85-305/120-430	12V	-40~+75	70.00×48.00×23.50	24

SFB[®]

TECHPHANT
技象科技

HELIST

LME Leaguer
力合莱电子

LONET
龙腾照明

robustel

千方科技
CHINA TRANSINFO

赛尔通信
SHERCOM CORPORATION

HOMY CLOUD

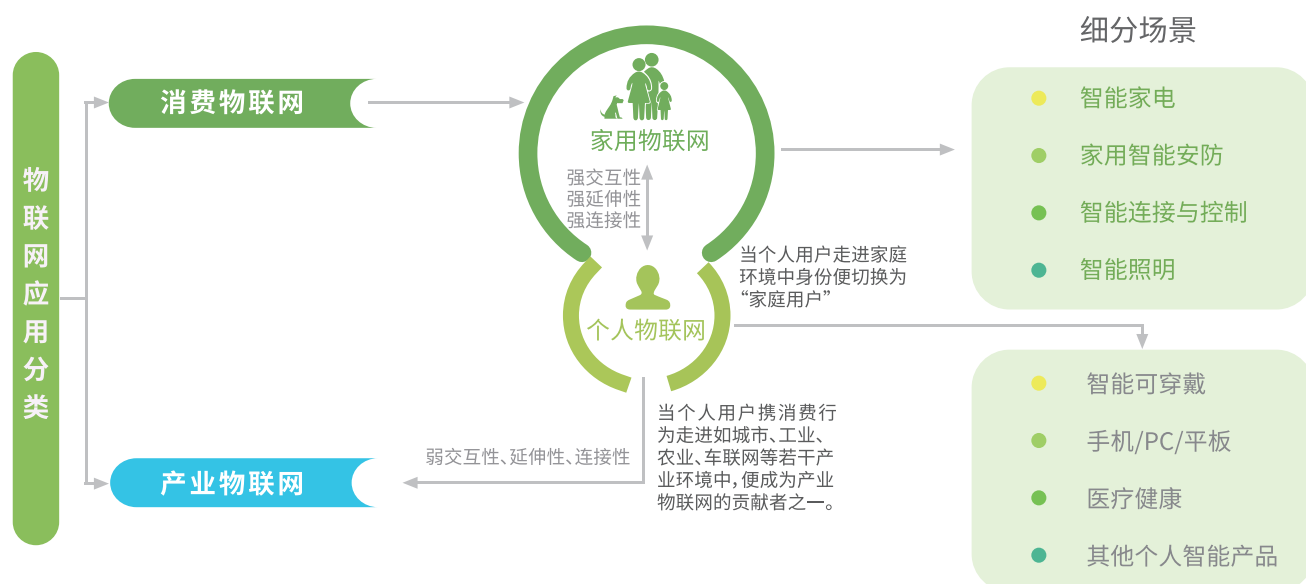
SNBC

模块电源在物联网的应用

物联网概念

物联网 (The Internet of Things, 简称IoT) 是指通过各种信息传感器、射频识别技术、全球定位系统、红外感应器、激光扫描器等各种装置与技术, 实时采集任何需要监控、连接、互动的物体或过程, 采集其声、光、热、电、力学、化学、生物、位置等各种需要的信息, 通过各类可能的网络接入, 实现物与物、物与人的泛在连接, 实现对物品和过程的智能化感知、识别和管理。物联网是一个基于互联网、传统电信网等的信息承载体, 它让所有能够被独立寻址的普通物理对象形成互联互通的网络。

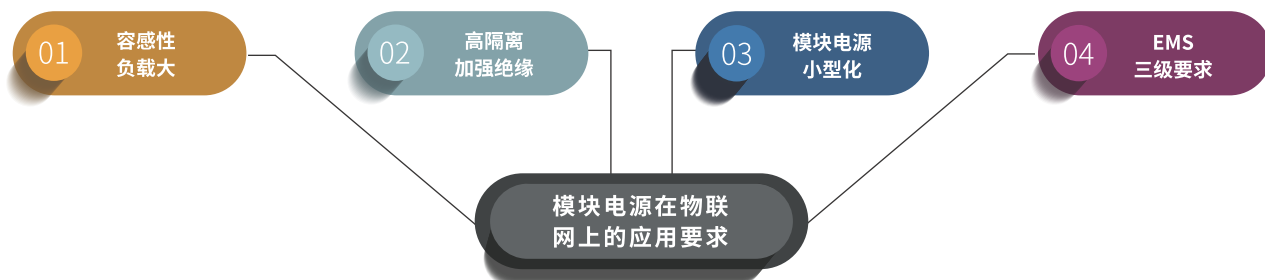
模块电源在物联网的应用分类



模块电源在物联网技术上的家庭消费应用领域, 旨在提升居民生活体验, 国家标准GB/T33745-2017对物联网技术的定义, 通过感知设备, 按照约定协议, 连接物、人、系统和信息资源, 实现对物理世界和虚拟世界的信息进行处理并作出反应的智能服务系统。

模块电源在物联网上的应用要求

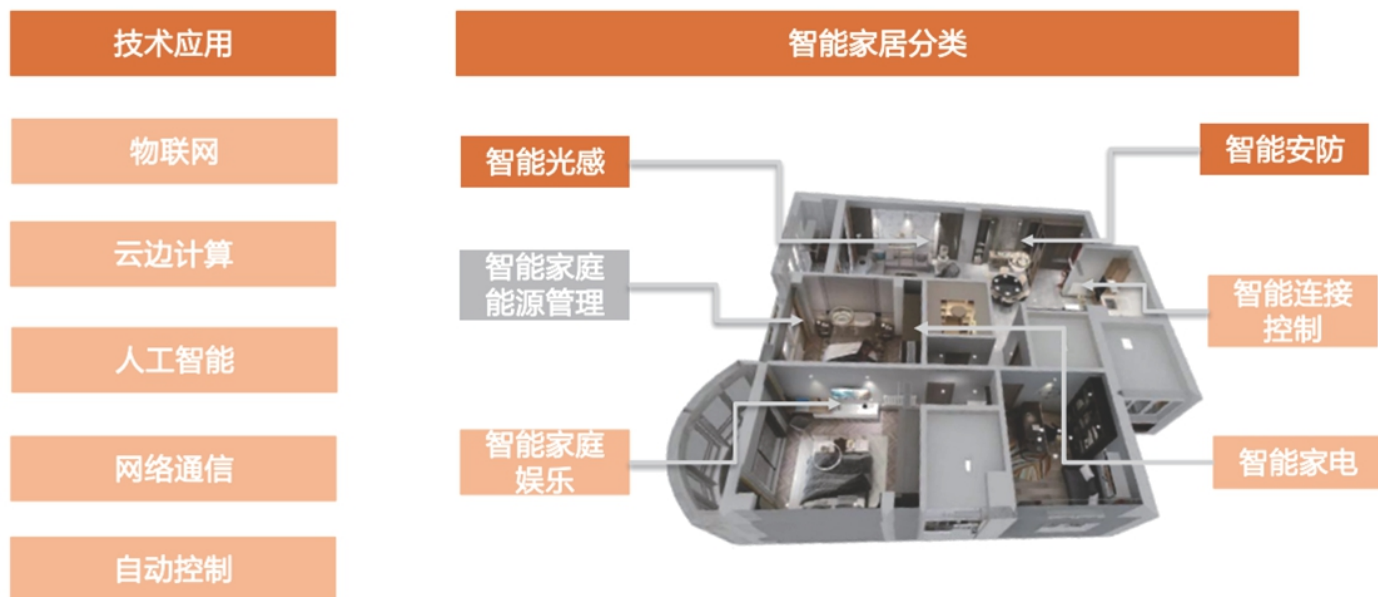
在专业物联网设备中, 电源模块的选择无疑是整个系统或产品的关键决策。产品越来越趋向于小型化、低功耗、小尺寸、高效率化、高隔离化、低成本化。此外, 由于这类物联网系统通常是电池供电, 大部分时间处于待机模式, 只有一小部分时间处于活动模式, 因此低待机功耗是一项重要的指标。





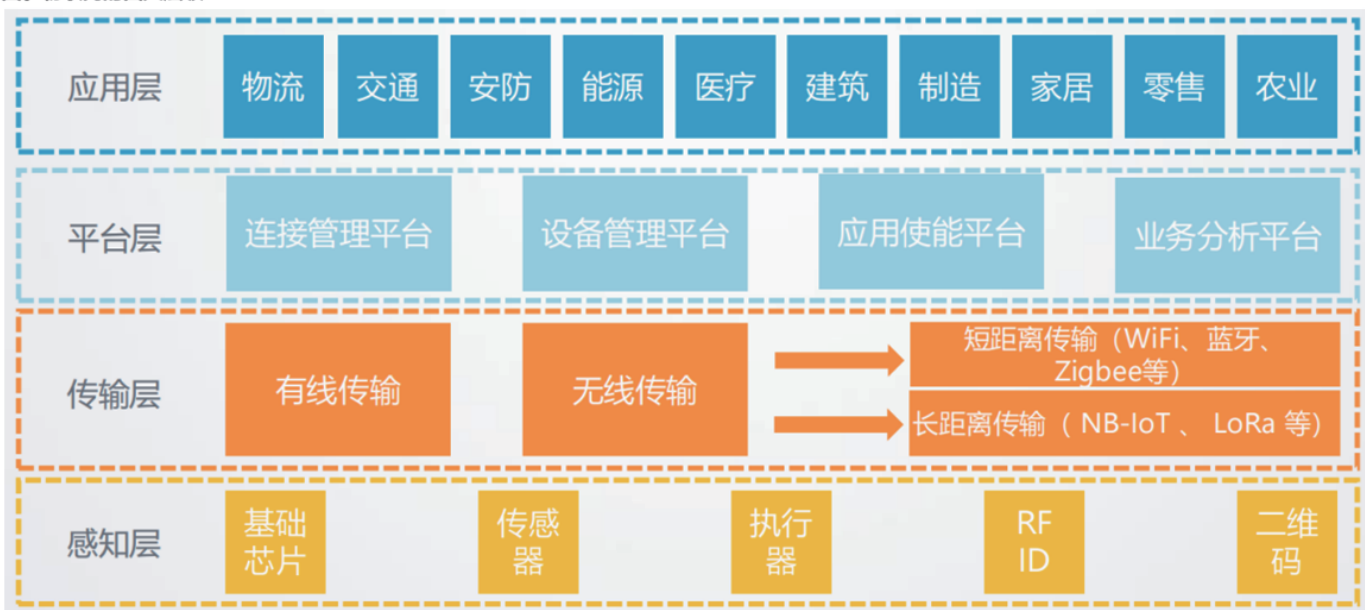
模块电源在物联网的应用

模块电源在物联网的应用分类



物联网应用构成的四大层级

图：物联网的四大层级



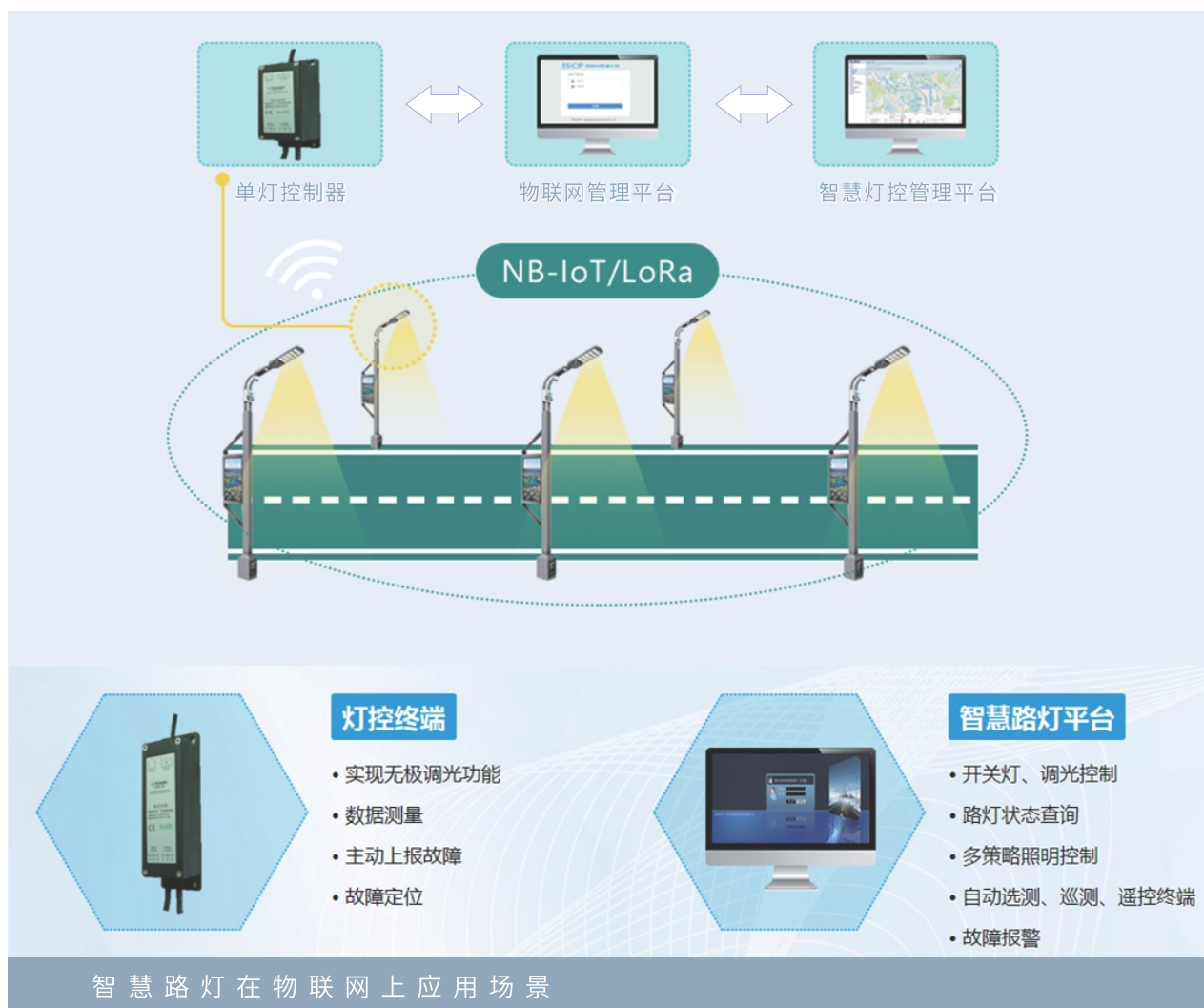
将各类终端设备，赋予网络功能，增加远程控制、实时追踪等丰富的功能。以智慧家居中的空调场景为例：空调中配置温度、人体红外线等传感器，采集屋内温度、判断室内是否有人（感知层）；空调上再加装物联网无线传输模组，通过Wi-Fi等方式联网（传输层）；通过手机APP以及背后的管理平台软件（平台层），可以用APP远程遥控、定时开关、离开房间自动关闭等（应用层）。



产品应用场景



智慧城市在物联网上应用场景



智慧路灯在物联网上应用场景





模块产品应用解决方案

方案描述

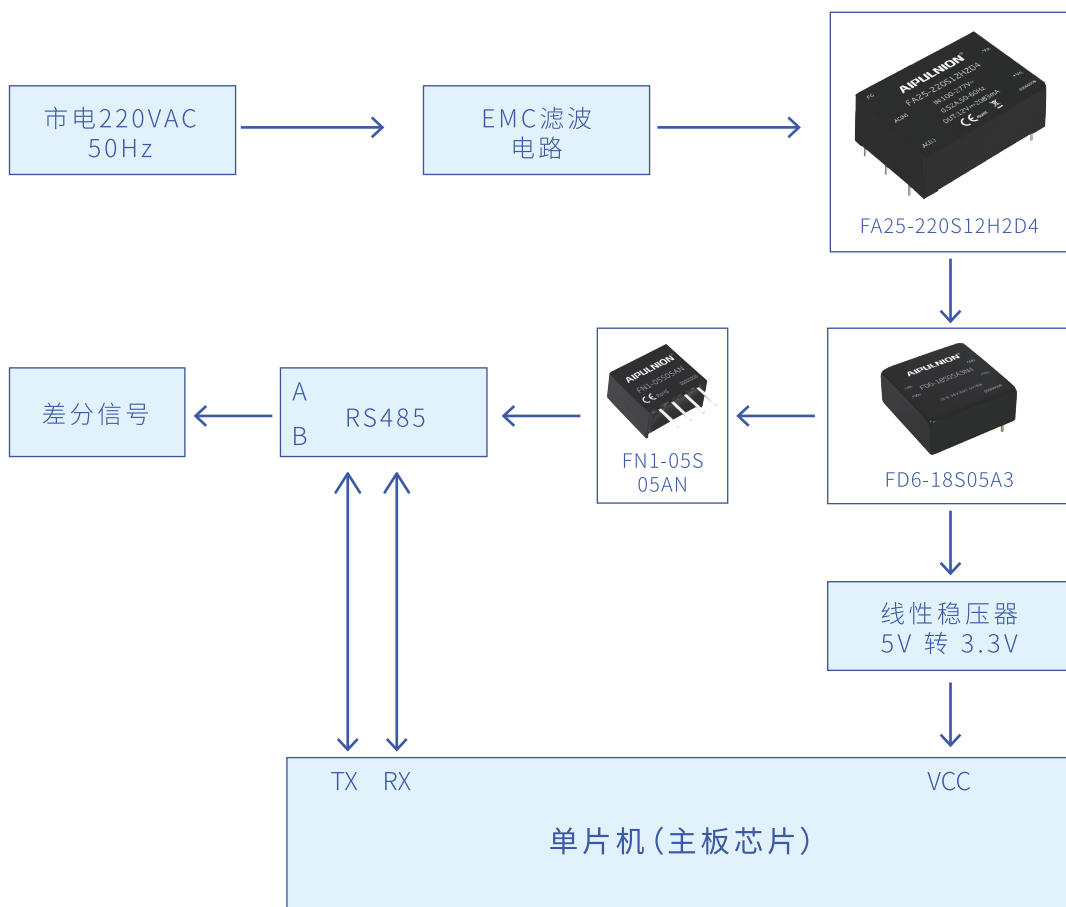
通过各类可能的网络接入,实现物与物、物与人的泛在连接,物联网主控制器最求美观化,小型化,因此需要控制器的电路板在这样小体积的条件下要求工作稳定可靠,且要实现智能家居基本的便利功能:如窗帘控制器通过互联网应具备有远程控制、面板显示、场景控制等功能。

方案特点

模块电源的方案替代(线性电源)变压器的方案,通过开关电源本身参数的设计,实现稳压输出,且附带过流、短路等保护功能,从而实现外围电路简单、布板设计简洁的特点。由于模块电源采用的是高频控制的方式,所以内部变压器可以设计得很小,使得整个模块电源及整机小型化。

供电方式

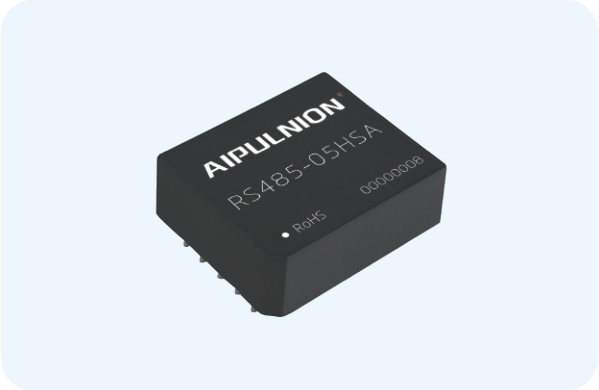
市电通过防护电路进去到AC-DC电源模块,由电源模块输出稳定的12V电压、12V转5V分别给到微功率和三端稳压器输入供电,三端稳压器输出3.3V给后端的单片机提供工作电压、微功率采用输入5V/输出1W/5V给485隔离模块提供工作电压。



物联网终端功能控制和实现的核心是MCU芯片。由CPU、存储器、各类端口等构成,是智能控制的核心部件,输入界面(按键、APP遥控等)输入的命令等经过MCU的分析和处理,再控制执行机构(电机、变频压缩机、音频设备等),实现物联网最终的功能。单片机的电源电压是由一个AC转DC的模块电源,220V转12VDC,通过三端稳压(LDO)输出3.3V给到单片机供电。

产品特性/Product Features

- RS485-XXHSAV波特率高达 High baud rate up to : 500Kbps
- 内置隔离电源 Integrated isolated DC/DC converter
- 同一网络可支持连接256个节点 The bus is able to support 256 nodes at maximum
- 两端隔离 Two-port isolation : 3750VAC
- 总线保护 Bus protection
- 工作环境温度 Operating Temp:-40℃~+85℃
- 塑料外壳,小型SMD封装和DIP封装自由选择,符合UL94V-0级 小型 SIP封装
Case:Plastic,meet UL94V-0,compact SIP packing
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



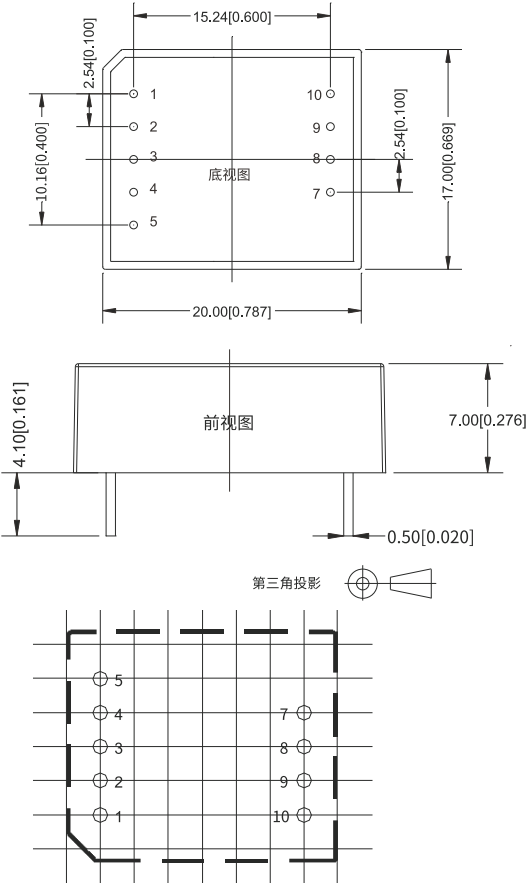
产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输入电流 Input current		认证 Certificate
	范围值 Range	静态电流 Static current	发送电流 Send current	符合RoHS
	(VDC)	(mA)		
RS485-05HSA	4.75-5.25	40	80	

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

管脚号码 Pin-out	1	2	3	4	5
标识 Single	VCC	GND	TXD	RXD	CON
功能	输入电源正	输入电源地	发送引脚	接收引脚	发送、接收控制脚
管脚号码 Pin-out	8	9	10	封装尺寸 Package Dimensions	
标识 Single	B	A	RGND	20.00*17.00*7.00mm	
功能	B 引脚	A 引脚	隔离电源输出地	0.787*0.669*0.276inch	

封装尺寸/Packing Demension



单位 (Unit):mm
印刷板俯视图(Printed board vertical view)
栅格间距 (lattice spacing):2.54mm(0.1inch)
未注尺寸公差 (General tolerance):±0.5mm
未注明引脚直径公差 (Pin section tolerances):±0.10mm



注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated&unregulated output
- 空载输入电流低至8mA No load input current as low as 8mA
- 效率高达77% Transfer efficiency up to 77%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 通过CE认证标准 Passed the CE certification

- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表/Product List

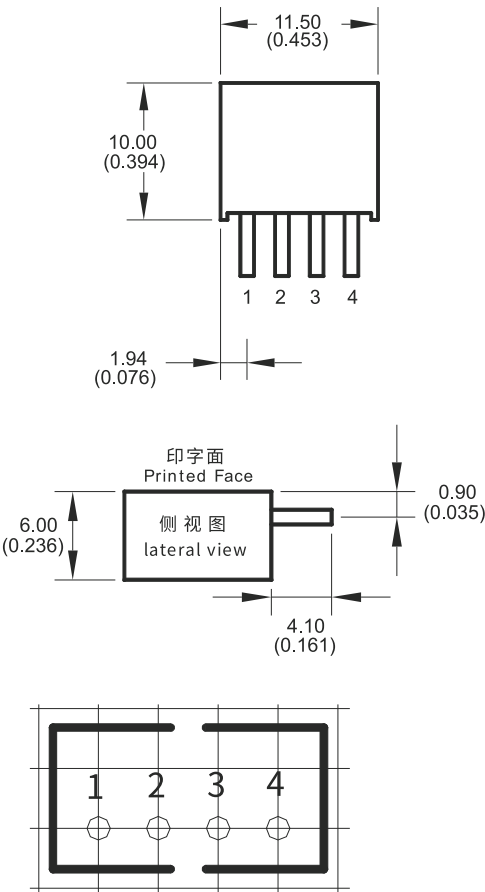
产品型号 Part no.	输入电压 Input voltage	输入电流 Input current	输出电压/电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	输出空载 Output no load	电压 Voltage	电流 (mA) Current (mA)	(%TYP)
	(VDC)	(mA)	(VDC)	MAX	
FN1-05S05A	4.5-5.5	34	5	200	77

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

管脚号码 Pin-out	1	2	3	4
单路 Single	GND	+Vin	-Vo	+Vo
功能	输入地	输入正极	输出负极	输出正极
封装代号 Packing Code/ Dimension	L*W*H			
A	11.50*6.00*10.00mm			
	0.453*0.236*0.394inch			

封装尺寸/Packing Dimension



单位 (Unit) :mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) :2.54mm (0.1inch)
未注尺寸公差 (General tolerance) :±0.5mm



注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 定电压输入，隔离非稳压输出 Fixed input voltage, isolated&unregulated output
- 空载输入电流低至8mA No load input current as low as 8mA
- 效率高达80% Transfer efficiency up to 80%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳，符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp:-40°C~+85°C
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 通过CE认证标准 Passed the CE certification

- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



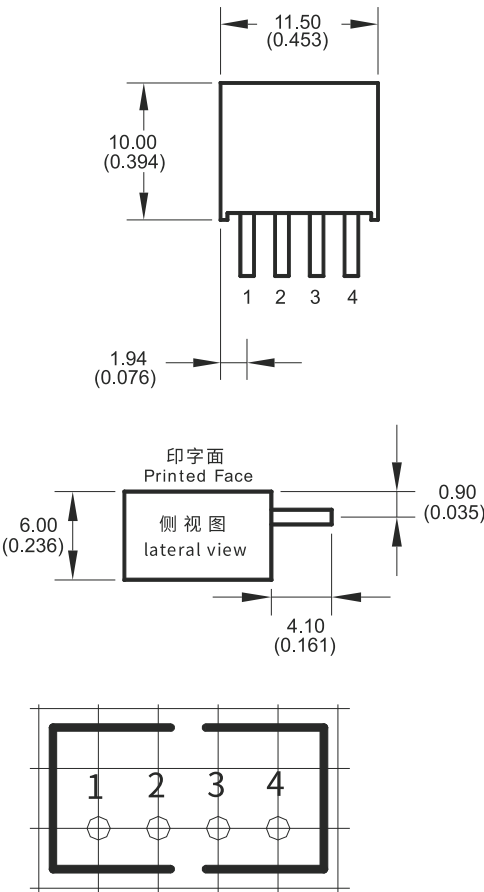
产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输入电流 Input current	输出电压/电流 Output voltage/current		输出效率 Output efficiency (%TYP)
	范围值 Range (VDC)	输出空载 Output no load (mA)	电压 Voltage (VDC)	电流 (mA) Current (mA) MAX	
FN1-3V3S3V3AN	2.97-3.63	30	3.3	303	72
FN1-05S05AN	4.5-5.5	17	5	200	80
FN1-12S05AN	10.8-13.2	11	12	200	80

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

管脚号码 Pin-out	1	2	3	4
单路 Single	GND	+Vin	-Vo	+Vo
功能	输入地	输入正极	输出负极	输出正极
封装代号 Packing Code/ Dimension	L*W*H			
A	11.50*6.00*10.00mm			
	0.453*0.236*0.394inch			

封装尺寸/Packing Dimension



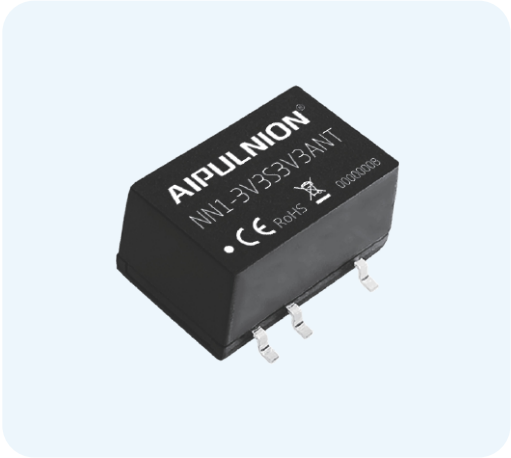
单位 (Unit): mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm



注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 定电压输入, 隔离非稳压双路输出 Fixed input voltage, isolated&unregulated double output
 - 空载输入电流低 Low no-load input current
 - 效率高达80% Transfer efficiency up to 80%
 - 隔离电压 (Isolation voltage): 1500VDC
 - 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
 - 工作环境温度 Operating Temp:-50°C~+115°C
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表/Product List

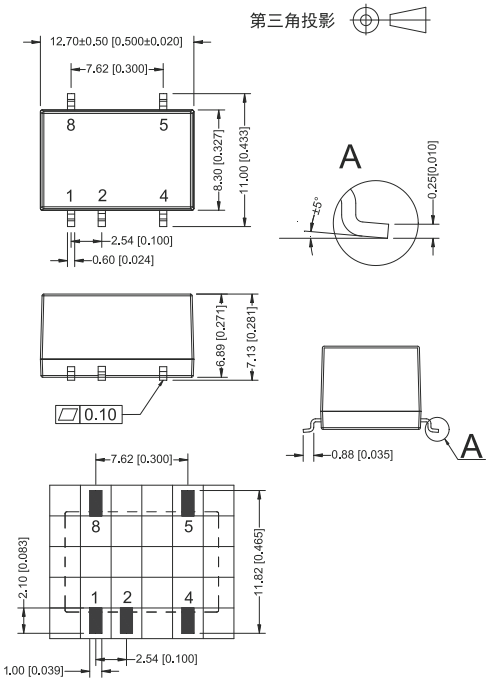
产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 (mA) Current (mA)	(%TYP)
	(VDC)	(VDC)	MAX	
NN1-3V3S3V3ANT	2.97-3.63	3.3	303	80

注1: 因篇幅有限, 以上是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

管脚号码 Pin-out	1	2	4	5	8
双路 Dual	-Vin	+Vin	GND	+Vo	NC
功能	输入负极	输入正极	输入电源地	输出正极	无功能
封装代号 Packing Code/Dimension	L*W*H				
ANT	12.70*8.30*6.89mm				
	0.500*0.327*0.271inch				

NC:不能与任何外部电路连接

封装尺寸/Packing Dimension



- ◆ 产品特性/Product Features
- 定电压输入, 隔离非稳压输出 Fixed input voltage, isolated&unregulated output

○

空载输入电流低至8mA No load input current as low as 8mA

○

效率高达84% Transfer efficiency up to 84%

○

隔离电压 (Isolation voltage) : 1500VDC

○

塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing

○

工作环境温度 Operating Temp:-40℃~+85℃

○

保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery

○

通过CE认证标准 Passed the CE certification

●

测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



◆ 产品列表/Product List

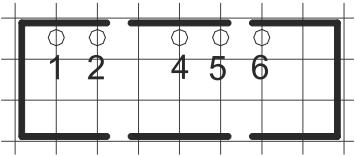
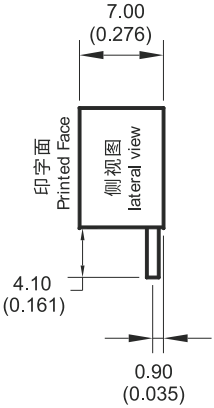
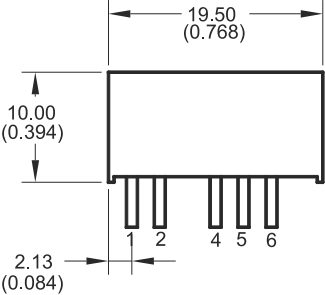
产品型号 Part no.	输入电压 Input voltage	输入电流 Input current	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	输出空载 Output no load	电压 Voltage	电流 (mA) Current (mA)	(%TYP)
	(VDC)	(mA)	(VDC)	MAX	
FN2-05S05CN	4.5-5.5	50	5	400	84

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注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

管脚号码 Pin-out	1	2	4	5	6
单路 Single	+Vin	GND	-Vo	NP	+Vo
功能	输入正极	输入地	输出负极	空脚	输出正极
封装代号 Packing Code/ Dimension	L*W*H				
C	19.50*7.00*10.00mm				
	0.768*0.276*0.394inch				

封装尺寸/Packing Demension



单位 (Unit) :mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (latic spacing) :2.54mm(0.1inch)
未注尺寸公差 (General tolerance) :±0.5mm



注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 宽电压输入, 隔离稳压输出 Wide input voltage range isolated®ulated output
- 空载输入电流低至4mA No load input current as low as 4mA
- 效率高达78% Transfer efficiency up to 78%
- 隔离电压 (Isolation voltage) : 1500VDC
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case:Plastic,meet UL94V-0,compact SIP packing
- 工作环境温度 Operating Temp : -40°C~+85°C
- 保护功能: 可持续短路保护 Protection : Sustainable short circuit protection
- 具有遥控关断功能 With remote control off function
- 通过CE认证标准 Passed the CE certification
- 测试条件: 如无特殊指定, 所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition : Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



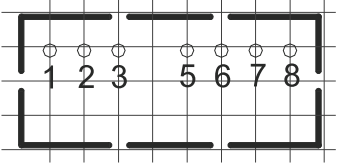
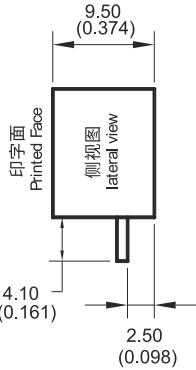
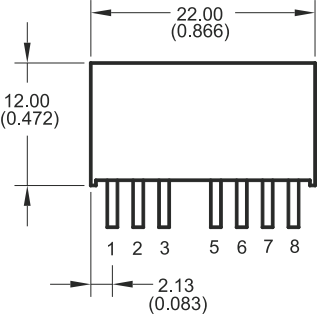
产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输入电流 Input current	输出电压/电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	输出空载 Output no load	电压 Voltage	电流 (mA) Current (mA)	(%TYP)
	(VDC)	(mA)	(VDC)	MAX	
FK3-24S05E	18-36	6	5	600	78

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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

管脚号码 Pin-out	1	2	3	5	6	7	8
单路 Single	GND	+Vin	Ctrl	NC	+Vo	0V	CS
功能	输入地	输入正极	控制脚	无电气	输出正极	输出地	外接电容
封装代号 Packing Code/ Dimension	L*W*H						
E	22.00*9.50*12.00mm						
	0.866*0.374*0.472inch						

封装尺寸/Packing Dimension



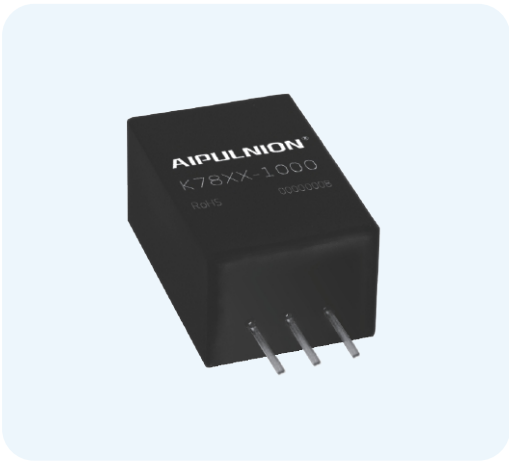
单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm



注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性/Product Features

- 宽电压输入, 非隔离输出 Wide input voltage range, non-isolated output
- 低纹波、噪声 Low ripple&noise
- 效率高达93% Transfer efficiency up to 93%
- 塑料外壳, 符合UL94V-0级 小型 SIP封装 Case: Plastic, meet UL94V-0, compact SIP packing
- 保护功能: 短路保护、过热保护 Protection : Short circuit, over temperature
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition : Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



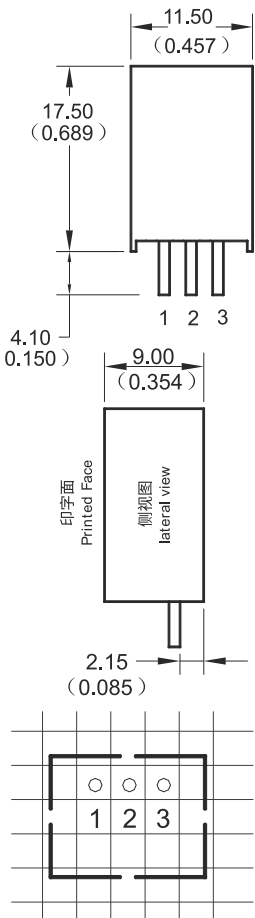
◆ 产品列表/Product List

产品型号 Part no.	静态电流 Static current	输入电压 Input voltage	输出电压/电流 Output voltage/current		输出效率 Output efficiency	
	(mA)	范围值 Range (VDC)	电压 Voltage (VDC)	电流 Current (mA)	Vin(min)	Vin(max)
K7805-1000	5	6.5-32	5	1000	93	

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

管脚号码 Pin-out	1	2	3
单路 Single	+Vin	GND	+Vo
功能	输入正极	公共地	输出正极
封装代号 Packing Code/ Dimension	L*W*H		
/	11.50*9.00*17.50mm		
	0.453*0.354*0.689inch		

封装尺寸/Packing Dimension



单位 (Unit) : mm
印刷板俯视图 (Printed board vertical view)
栅格间距 (lattice spacing) : 2.54mm (0.1inch)
未注尺寸公差 (General tolerance) : ±0.5mm



注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性/Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.02W Low standby power consumption to 0.02W
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压 (Isolation voltage) : 2150VAC
- 工作环境温度 Operating Temp:-40℃~+85℃
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 电磁兼容EMI特性好 Good electromagnetic compatibility EMI characteristics
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



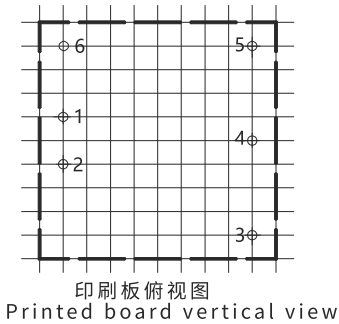
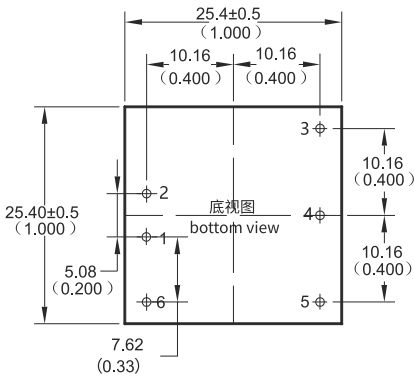
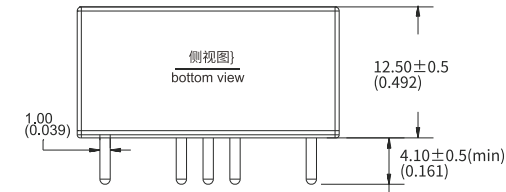
◆ 产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输入电流 Input current	输出电压电流 Output voltage/current		输出效率 Output efficiency (%TYP)
	范围值 Range (VDC)	输出空载 Output no load (mA)	电压 Voltage (VDC)	电流 Current (mA)	
	9-36	2	5	3000	

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Note 2: The fluctuation range of full load efficiency(% TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3: 后缀带 "C" 为产品带 Ctrl 控制功能; 单路输出产品不带控制脚后缀为 "N", -H 为带散热片, "-T(H)" 为接线式(带散热片)封装, "-TS(H)" 为导轨式(带散热片)封装, 导轨宽度 35mm。
Note 3: Suffix with "C" means it with CTRL control function; Single output product without control pin suffix "N2"; "-H" suffix is with heat sink, "-T(H)" suffix for chassis mounting(with heat sink), "-TS(H)" suffix for DIN-Rail mounting(with heat sink). DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5	6
单路 Single	-Vin	+Vin	+Vo	NC	GND	CTRL
单路功能	输入负极	输入正极	输出正极	无此脚	输出地	远程控制脚
封装代号 Packing Code/Dimension	L*W*H					
A3	25.40*25.40*12.50mm					
	1.000*1.000*0.492inch					

封装尺寸/Packing Dimension



单位 (Unit): mm
栅格间距 (latic spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明针脚直径公差 (Pin section tolerances): ±0.10mm



注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性/Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
 - 低待机功耗低至0.1W Low standby power consumption to 0.1W
 - 效率高达87% Transfer efficiency up to 87%
 - 隔离电压 (Isolation voltage) : 1500VDC
 - 工作环境温度 Operating Temp:-40℃~+85℃
 - 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
 - 国际标准引脚 International standard pin
 - 电磁兼容EMC:裸机满足 (bare board) CISPR32/EN55032 CLASS A
- 测试条件:如无特殊指定,所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



◆ 产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输入电流 Input current	输出电压电流 Output voltage/current		输出效率 Output efficiency (%TYP)
	范围值 Range (VDC)	输出空载 Output no load (mA)	电压 Voltage (VDC)	电流 Current (mA)	
FD12-36S12A3C2	18-75	2	12	1000	87
FD12-36S12A3N2					

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注2: 表格中为满载效率 (% TYP), 波动幅度为 ±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(% TYP) is ±2%, full load output efficiency= total output power/module's input power.

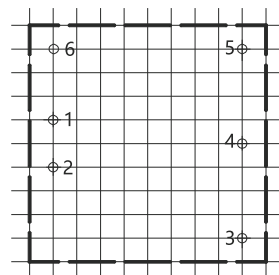
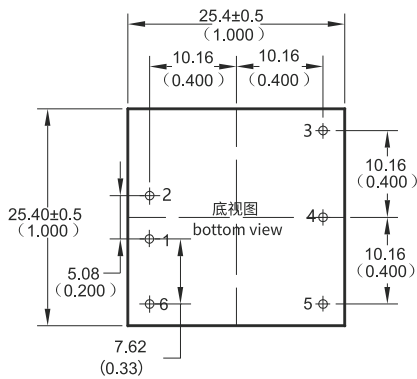
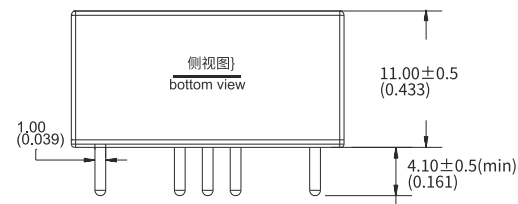
注3: 后缀带“C”为产品带Ctrl控制功能;单路输出产品不带控制脚后级为“-N”, -H为带散热片,“-T(H)”为接线式(带散热片)封装,“-TS(H)”为导轨式(带散热)封装,导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function; Single output product without control pin suffix “N2”; “-H” suffix is with heat sink. “-T(H)” suffix for chassis mounting(with heat sink), “-TS(H)” suffix for DIN-Rail mounting(with heat sink), DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5	6
A3C2	-Vin	+Vin	+Vo	NP	GND	CTRL
	输入负极	输入正极	输出正极	空脚	输出地	远程控制脚
A3N2	-Vin	+Vin	+Vo	NP	GND	NP
	输入负极	输入正极	输出正极	空脚	输出地	无此脚
封装代号 Packing Code/Dimension	L*W*H					
A3	25.40*25.40*11.00mm					
	1.000*1.000*0.433inch					



技术手册

封装尺寸/Packing Dimension



印刷板俯视图
Printed board vertical view

单位 (Unit): mm
栅格间距 (latic spacing): 2.54mm(0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明引脚直径公差 (Pin section tolerances): ±0.10mm

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

◆ 产品特性/Product Features

- 超宽电压输入(4:1) Ultra wide input voltage rang(4:1)
- 低待机功耗低至0.05W Low standby power consumption to 0.05W
- 效率高达90% Transfer efficiency up to 90%
- 隔离电压 (Isolation voltage) : 1500VDC
- 金属外壳、输出纹波低 Metal case,low output ripple
- 保护功能:有短路保护,可自恢复 Protection:Short circuit,self-recovery
- 输入欠压,输出过压、短路、过流保护 Protection:Input under-voltage,output over-current,short-circuit
- 工作环境温度 Operating Temp:-40℃~+85℃
- 电磁兼容 EMI 特性好 EMI characteristics are good
- 通过CE、RoHS、UL认证 Has passed CE, RoHS, UL certification
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



◆ 产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输入电流 Input current	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	输出空载 Output no load	电压 Voltage	电流 Current	(%TYP)
	(VDC)	(mA)	(VDC)	(mA)	
FD20-18S05A3C	9-36	45	5	4000	90
FD20-36S12A3	18-75	5	12	1667	90

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注2:表格中为满载效率 (% TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

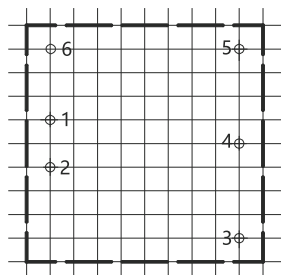
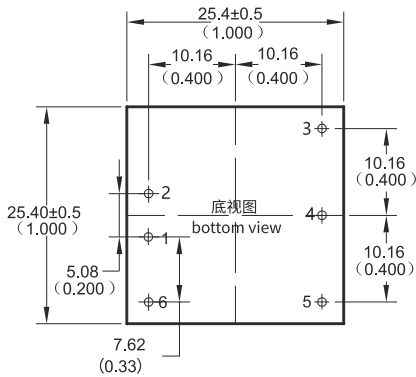
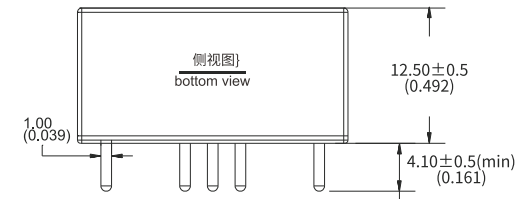
注3:后缀带"C"为产品带Ctrl控制功能;单路输出产品不带控制脚后缀为"N", -H为带散热片, "-T(H)"为接线式(带散热片)封装, "-TS(H)"为导轨式(带散热)封装,导轨宽度35mm。
Note 3: Suffix with "C" means it with CTRL control function;Single output product without control pin suffix "N2";"-H" suffix is with heat sink "-T(H)" suffix for chassis mounting(with heat sink), "-TS(H)" suffix for DIN-Rail mounting(with heat sink). DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5	6
A3C	-Vin	+Vin	+Vo	NP	GND	CTRL
	输入负极	输入正极	输出正极	空脚	输出地	远程控制脚
A3	-Vin	+Vin	+Vo	NP	GND	NP
	输入负极	输入正极	输出正极	空脚	输出地	无此脚
封装代号 Packing Code/Dimension	L*W*H					
A3	25.40*25.40*12.50mm					
	1.000*1.000*0.492inch					



技术手册

封装尺寸/Packing Dimension



印刷板俯视图
Printed board vertical view

单位 (Unit):mm
栅格间距 (latic spacing):2.54mm(0.1inch)
未注尺寸公差 (General tolerance):±0.5mm
未注明针脚直径公差 (Pin section tolerances):±0.10mm

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗≤0.35W Ultra low stand-by power consumption ≤ 0.35W
- 最高效率可达71% The highest efficiency is 71%
- 隔离电压 (Isolation voltage) : 3000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case: 6-side shielding plastic, UL94V-0 class
- 工作环境温度 Operating Temp: -40°C~+75°C
- 通过CE认证标准 Passed the CE certification
- 满足 Meet IEC62368/UL62368/EN62368 test standards 测试标准
- 交直流两用 AC-DC dual use
- PCB板上直插式安装 PCB Mounting
- 保护功能: 输入输出过流、短路、过温度保护
Protection: Input and output over-current, short-circuit, Overtemperature
- 测试条件: 如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 Current	(%TYP)
	(VAC/VDC)	(VDC)	(mA)	
FA3-220S05A3N2	85-265/120-380	5	600	71

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.

注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

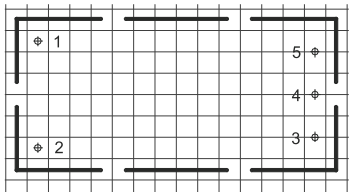
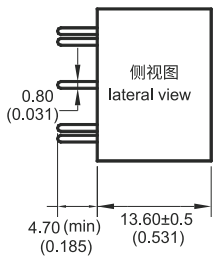
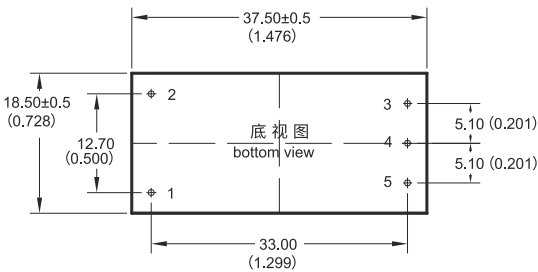
注3: 后缀带“C”为产品带Ctrl控制功能; -T为接线式封装, -TS为导轨式封装, 导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function; “-T” suffix for chassis mounting, “-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5
单路 Single	AC(N)	AC(L)	+Vo	NC	-Vo
单路功能	输入零线	输入火线	输出正极	空脚	输出地
封装代号 Packing Code/ Dimension	L*W*H				
A2	37.70*18.70*13.60mm				
	1.484*0.736*0.535inch				



技术手册

封装尺寸/Packing Dimension



单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明针脚直径公差 (Pin section tolerances): ±0.10mm

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
- 超低待机功耗≤0.10W Ultra low stand-by power consumption ≤ 0.10W
- 效率高达72% Transfer efficiency up to 72%
- 隔离电压 (Isolation voltage) : 3600VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40℃~+75℃
- 保护功能:输入输出过流、短路保护 Protection:Input and output over-current,short-circuit
- 满足 Meet IEC60950/UL60950/EN60950 test standards 测试标准
- 交直流两用 AC-DC dual use
- 超小体积裸板,工业级设计 Ultra small size bare board, industrial class design
- PCB板上直插式安装 PCB Mounting

测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



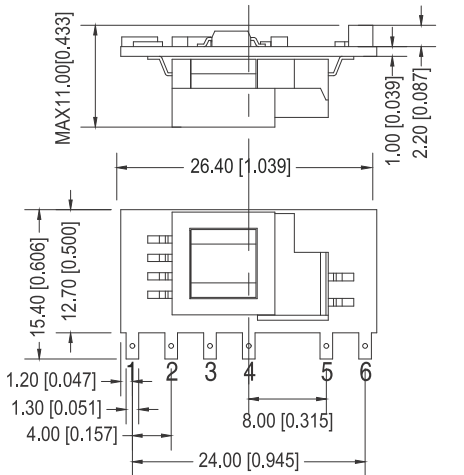
产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 Current	(%TYP)
	(VAC/VDC)	(VDC)	(mA)	
DA3-220S05G9D4	85-305/120-430	5	600	72

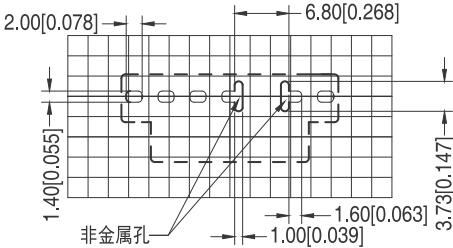
注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3: 后缀带“C”为产品带Ctrl控制功能;“-T”为接线式封装,“-TS”为导轨式封装, 导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function;“-T” suffix for chassis mounting, “-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5	6
单路 Single	AC(L)	AC(N)	+Vc	-Vc	-Vo	+Vo
功能	输入火线	输入零线	电容正极	电容负极	输出地	输出正极
封装代号 Packing Code/Dimension	L*W*H					
-	26.40*15.40*11.00mm					
	1.039*0.606*0.433inch					

封装尺寸/Packing Dimension



第三角投影



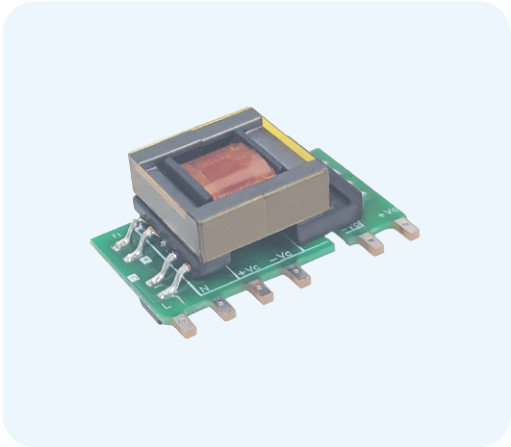
单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明针脚直径公差 (Pin section tolerances): ±0.10mm



注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
 - 超低待机功耗≤0.10W Ultra low stand-by power consumption ≤ 0.10W
 - 效率高达70% Transfer efficiency up to 70%
 - 隔离电压 (Isolation voltage) : 3600VAC
 - 工作环境温度 Operating Temp:-40℃~+75℃
 - 保护功能:输入输出过流、短路保护 Protection:Input and output over-current,short-circuit
 - 满足 Meet IEC60950/UL60950/EN60950 test standards 测试标准
 - 交直流两用 AC-DC dual use
 - 超小体积裸板,工业级设计 Ultra small size bare board, industrial class design
 - PCB板上直插式安装 PCB Mounting
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency (%TYP)
	范围值 Range	电压 Voltage	电流 Current	
	(VAC/VDC)	(VDC)	(mA)	
DA5-220S05G9D4	85-305/120-430	5	1000	70

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注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

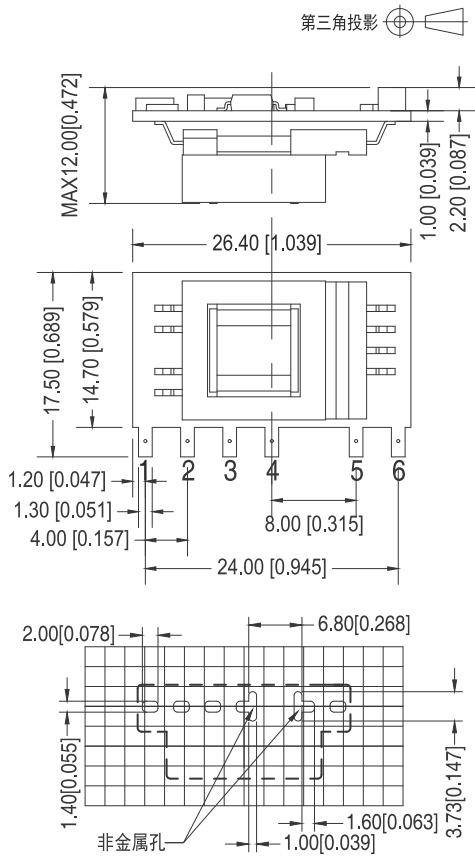
注3: 后缀带“C”为产品带Ctrl控制功能; -T为接线式封装, -TS为导轨式封装, 导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function; “-T” suffix for chassis mounting, “-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5	6
单路 Single	AC(L)	AC(N)	+Vc	-Vc	-Vo	+Vo
功能	输入火线	输入零线	电容正极	电容负极	输出地	输出正极
封装代号 Packing Code/Dimension	L*W*H					
-	26.40*17.60*11.00mm					
-	1.039*0.693*0.433inch					



技术手册

封装尺寸/Packing Dimension



单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明针脚直径公差 (Pin section tolerances): ±0.10mm

注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
- 超低待机功耗≤0.10W Ultra low stand-by power consumption ≤ 0.10W
- 效率高达78% Transfer efficiency up to 78%
- 隔离电压 (Isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40℃~+75℃
- 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
- 交直流两用 AC-DC dual use
- PCB板上直插式安装 PCB Mounting
- 符合CE认证标准 Meet CE standard
- 满足 IEC62368/UL62368/EN62368 测试标准 Meet IEC62368/UL62368/EN62368 test standards

测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



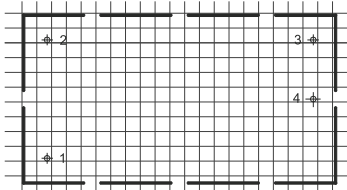
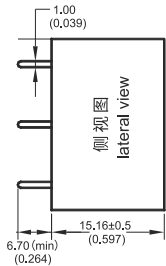
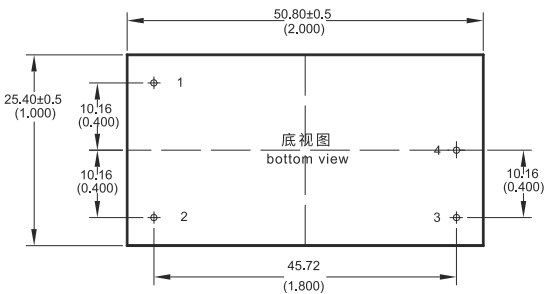
产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 Current	(%TYP)
	(VAC/VDC)	(VDC)	(mA)	
FA5-220S12Y2D4	90-265/127-375	12	416	78

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Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3:后缀带“C”为产品带Ctrl控制功能;“-T”为接线式片封装,“-TS”为导轨式封装,导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function;“-T” suffix for chassis mounting,“-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4
单路 Single	AC(L)	AC(N)	+Vo	-Vo
功能	输入火线	输入零线	输出正极	输出负极
封装代号 Packing Code/ Dimension	L*W*H			
Y2	50.80*25.40*15.16mm			
	2.000*1.000*0.597inch			

封装尺寸/Packing Dimension



印刷板俯视图
Printed board vertical view

单位 (Unit):mm
栅格间距 (lattice spacing):2.54mm(0.1inch)
未注尺寸公差 (General tolerance):±0.5mm
未注明针脚直径公差 (Pin section tolerances):±0.10mm

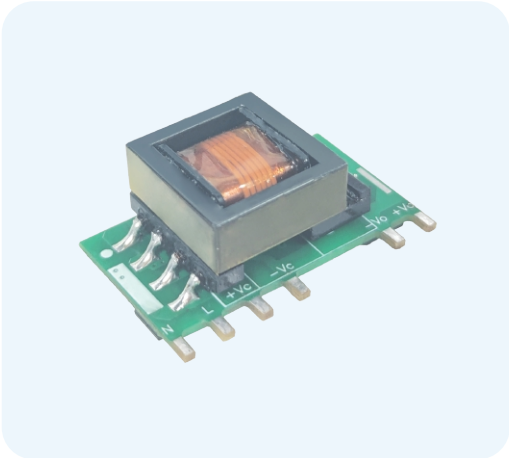


技术手册

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
 - 超低待机功耗≤0.20W Ultra low stand-by power consumption ≤ 0.20W
 - 效率高达80% Transfer efficiency up to 80%
 - 隔离电压 (Isolation voltage) : 3600VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40℃~+75℃
 - 保护功能:输入输出过流、短路保护 Protection : Input and Output over current, short circuit
 - 满足 IEC62368/UL62368/EN62368 测试标准 Meet IEC62368/UL62368/EN62368 test standards
 - 交直流两用 AC-DC dual use
 - 符合CE认证标准 Meet CE standard
 - 超小体积裸板,工业级设计 Ultra small size bare board, industrial class design
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 Current	(%TYP)
	(VAC/VDC)	(VDC)	(mA)	
DA10-220S05G9D4	85-305/120-430	5	2000	80

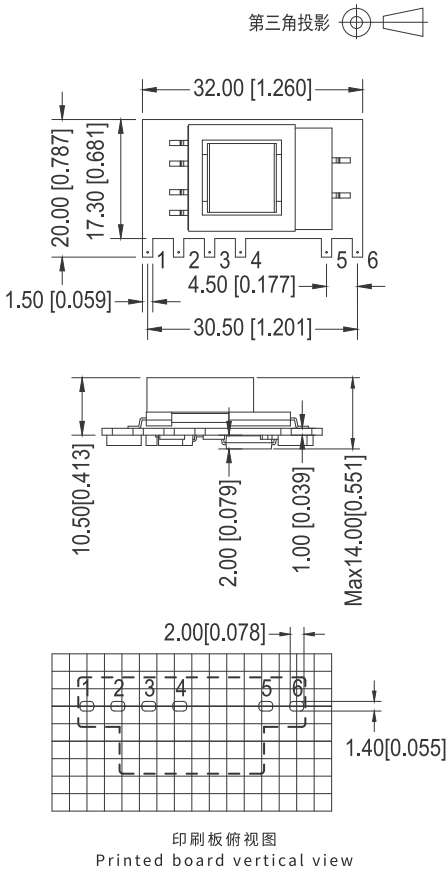
注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2:表格中为满载效率(%TYP),波动幅度为±2%,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3:后缀带"C"为产品带Ctrl控制功能;-T为接线式封装,-TS为导轨式封装,导轨宽度35mm。
Note 3: Suffix with "C" means it with CTRL control function; "-T" suffix for chassis mounting, "-TS" suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5	6
单路 Single	AC(N)	AC(L)	+Vo	-Vc	-Vo	+Vo
功能	输入零线	输入火线	电容正极	电容负极	输出地	输出正极
封装代号 Packing Code/ Dimension	L*W*H					
-	32.00*20.00*14.00mm					
	1.260*0.787*0.551inch					



注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

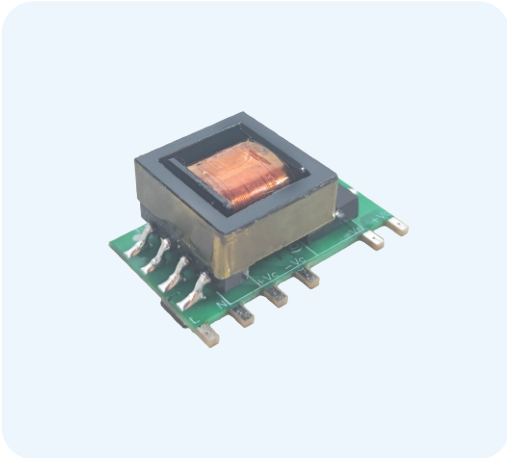
封装尺寸/Packing Dimension



单位 (Unit):mm
栅格间距 (lattice spacing):2.54mm(0.1inch)
未注尺寸公差 (General tolerance):±0.5mm
未注明针脚直径公差 (Pin section tolerances):±0.10mm

◆ 产品特性/Product Features

- 超宽输入电压范围 Universal wide input voltage range:85-265VAC/120-380VDC
 - 超低待机功耗≤0.30W Ultra low stand-by power consumption ≤ 0.30W
 - 效率高达79% Transfer efficiency up to 79%
 - 隔离电压 (Isolation voltage) : 3600VAC
 - 超小体积裸板、工业级设计 Ultra small size bare board, industrial class design
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 满足Meet IEC60950/UL60950/EN60950 test standard 测试标准
 - 交直流两用 AC-DC dual use
 - PCB板上直插式安装 PCB Mounting
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



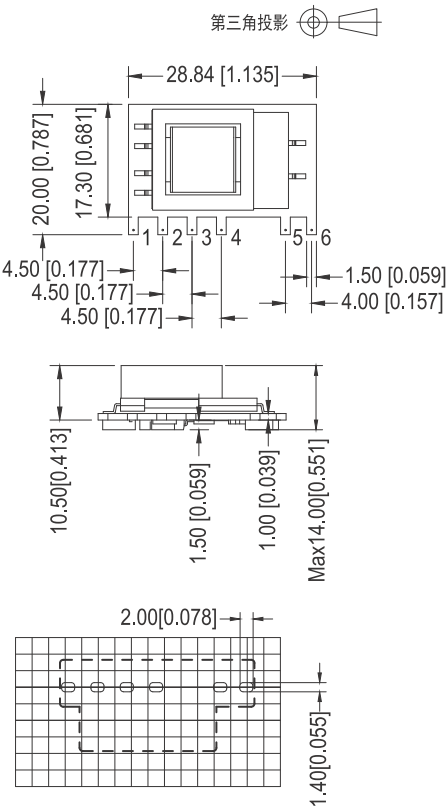
◆ 产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 Current	(%TYP)
	(VAC/VDC)	(VDC)	(mA)	
DA10-220S12G9N4	85-305/120-430	12	833	79

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.

管脚号码 Pin-out	1	2	3	4	5	6
单路 Single	AC(N)	AC(L)	+Vc	-Vc	-Vo	+Vo
功能	输入零线	输入火线	电容正极	电容负极	输出地	输出正极
封装代号 Packing Code/Dimension	L*W*H					
/	32.00*25.80*16.00mm					
	1.260*1.016*0.630inch					

封装尺寸/Packing Dimension



单位 (Unit): mm
栅格间距 (lattice spacing): 2.54mm (0.1inch)
未注尺寸公差 (General tolerance): ±0.5mm
未注明针脚直径公差 (Pin section tolerances): ±0.10mm



注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-265VAC/120-380VDC
- 超低待机功耗≤0.35W Ultra low stand-by power consumption ≤ 0.35W
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压(Isolation voltage) : 4000VAC
- 外壳:全封闭塑壳外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40°C~+75°C
- 保护功能:输入输出过流、短路保护 Protection:Input and output over-current,short-circuit
- 电磁兼容EMC:裸机满足(bare board) CISPR22/EN55032/GB9254 CLASS B
- 交直流两用 AC-DC dual use
- CLASS II电源并通过LPS(限功率电源)测试 CLASS II and pass LPS test
- PCB板上直插式安装 PCB Mounting
- 通过CE认证标准 Passed the CE certification
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



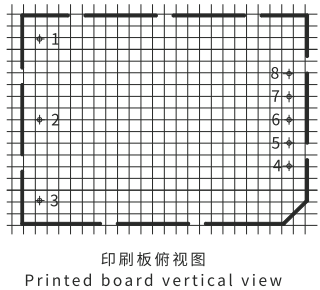
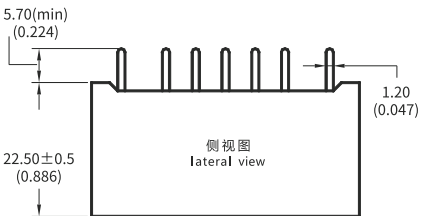
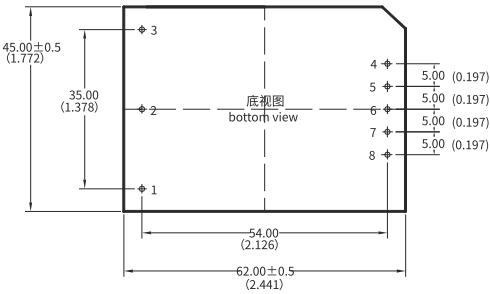
封装尺寸/Packing Dimension

产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 Current	(%TYP)
	(VAC/VDC)	(VDC)	(mA)	
FA15-220S12F2D4	85-265/120-380	12	1250	84

注1: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。
Note 1: Due to space limitations, above is only a part of our product list, please contact our sales team for more items.
注2: 表格中为满载效率(%TYP), 波动幅度为±2%, 满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3: 后缀带“C”为产品带Ctrl控制功能; -T为接线式片封装, -TS为导轨式封装, 导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function; “-T” suffix for chassis mounting, “-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	8
单路 Single	FG	AC(N)	AC(L)	+Vo	-Vo
功能	无功脚	输入零线	输入火线	输出正极	输出负极
封装代号 Packing Code Dimension	L*W*H				
F2	62.00*45.00*22.50mm				
	2.441*1.771*0.886inch				



单位(Unit): mm
栅格间距(latic spacing): 2.54mm(0.1inch)
未注尺寸公差(General tolerance): ±0.5mm
未注明针脚直径公差(Pin section tolerances): ±0.10mm



注意: 电源模块的各管脚定义如与选型手册不符, 应以实物标签上的标注为准。
Note: If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range:85-305VAC/120-430VDC
- 超低待机功耗≤0.35W Ultra low stand-by power consumption ≤ 0.35W
- 效率高达84% Transfer efficiency up to 84%
- 隔离电压(Isolation voltage) : 4000VAC
- 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
- 工作环境温度 Operating Temp:-40℃~+75℃
- 保护功能:输入输出过流、短路保护 Protection:Input and output over-current,short-circuit
- 满足(Meet the IEC60950/UL60950/EN60950 test standard) 测试标准
- 交直流两用 AC-DC dual use
- PCB板上直插式安装 PCB Mounting

测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25℃室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25℃.



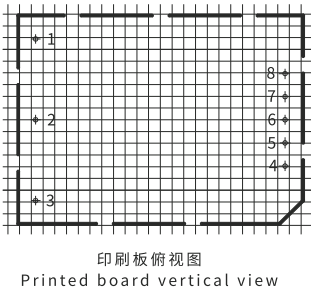
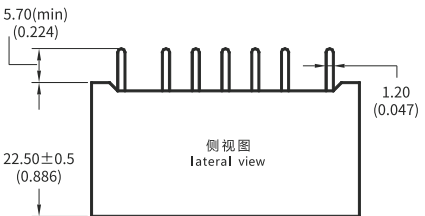
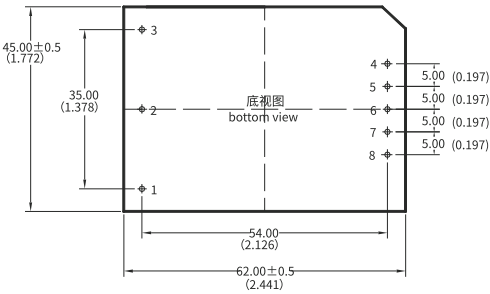
封装尺寸/Packing Dimension

产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency (%TYP)
	范围值 Range	电压 Voltage	电流 Current	
	(VAC/VDC)	(VDC)	(mA)	
FA15-220S12F2N4	85-305/120-430	12	1250	84

注1:因篇幅有限,以上只是部分产品列表,若需列表以外产品,请与本公司销售部联系。
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Note 2: The fluctuation range of full load efficiency(%TYP) is ±2%, full load output efficiency= total output power/module's input power.
注3:后缀带“C”为产品带Ctrl控制功能;“-T”为接线式封装,“-TS”为导轨式封装,导轨宽度35mm。
Note 3: Suffix with “C” means it with CTRL control function;“-T” suffix for chassis mounting,“-TS” suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	8
单路 Single	FG	AC(N)	AC(L)	+Vo	-Vo
功能	无功脚	输入零线	输入火线	输出正极	输出负极
封装代号 Packing Code/Dimension	L*W*H				
F2	62.00*45.00*22.50mm				
	2.441*1.771*0.886inch				



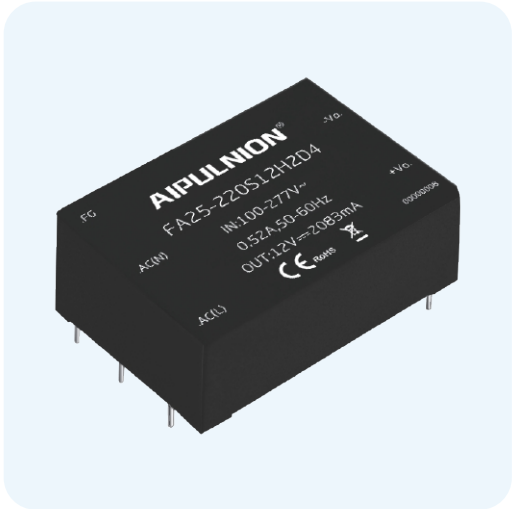
单位(Unit):mm
栅格间距(latic spacing):2.54mm(0.1inch)
未注尺寸公差(General tolerance):±0.5mm
未注明针脚直径公差(Pin section tolerances):±0.10mm



注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

产品特性/Product Features

- 国际通用全电压范围输入 Universal wide input voltage range
 - 超低待机功耗 $\leq 0.45\text{W}$ Ultra low stand-by power consumption $\leq 0.45\text{W}$
 - 效率高达85% Transfer efficiency up to 85%
 - 隔离电压(Isolation voltage): 4000VAC
 - 外壳:全封闭塑料外壳,符合UL94V-0级 Case:6-side shielding plastic,UL94V-0 class
 - 工作环境温度 Operating Temp:-40°C~+75°C
 - 保护功能:输出过流、短路保护 Protection:Output over-current,short-circuit
 - 满足 Meet IEC60950/UL60950/EN60950 test standards 测试标准
 - 交直流两用 AC-DC dual use
 - 通过CE、RoHS认证 Has passed CE, RoHS certification
 - PCB板上直插式安装 PCB Mounting
- 测试条件:如无特殊指定、所有参数测试均在标称输入电压、纯电阻额定负载及25°C室温环境下测得
Test condition: Unless otherwise specified, data in the datasheet is tested under the conditions of inputting nominal voltage, pure resistance rated load and Ta=25°C.



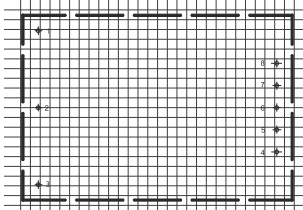
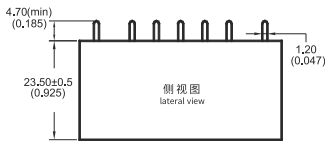
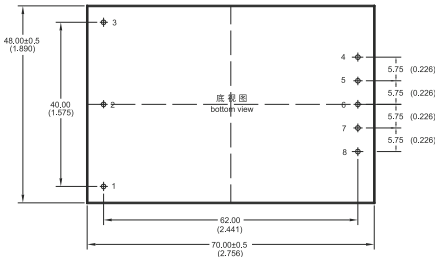
产品列表/Product List

产品型号 Part no.	输入电压 Input voltage	输出电压电流 Output voltage/current		输出效率 Output efficiency
	范围值 Range	电压 Voltage	电流 Current	(%TYP)
	(VAC/VDC)	(VDC)	(mA)	
FA25-220S12H2D4	85-305/120-430	12	2083	85

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注2:表格中为满载效率(%TYP),波动幅度为 $\pm 2\%$,满载输出效率等于输出的总功率除以电源模块的输入功率。
Note 2: The fluctuation range of full load efficiency(%TYP) is $\pm 2\%$, full load output efficiency= total output power/module's input power.
注3:后缀带"C"为产品带Ctrl控制功能;-T为接线式封装,-TS为导轨式封装,导轨宽度35mm。
Note 3: Suffix with "C" means it with CTRL control function; "-T" suffix for chassis mounting, "-TS" suffix for DIN-Rail mounting, DIN-Rail width is: 35mm.

管脚号码 Pin-out	1	2	3	4	5	6	7	8
单路 Single	FG	AC(N)	AC(L)	+Vo	NP	NP	NP	-Vo
功能	接地	输入零线	输入火线	输出正极	空脚	空脚	空脚	输出地
封装代号 Packing Code/ Dimension	L*W*H							
H2	70.00*48.00*23.50mm							
	2.756*1.890*0.925inch							

封装尺寸/Packing Dimension



印刷板俯视图
Printed board vertical view

单位(Unit):mm
印刷板俯视图(Printed board vertical view)
栅格间距(latic spacing):2.54mm(0.1inch)
未注尺寸公差(General tolerance): $\pm 0.5\text{mm}$
未注明针脚直径公差(Pin section tolerances): $\pm 0.10\text{mm}$



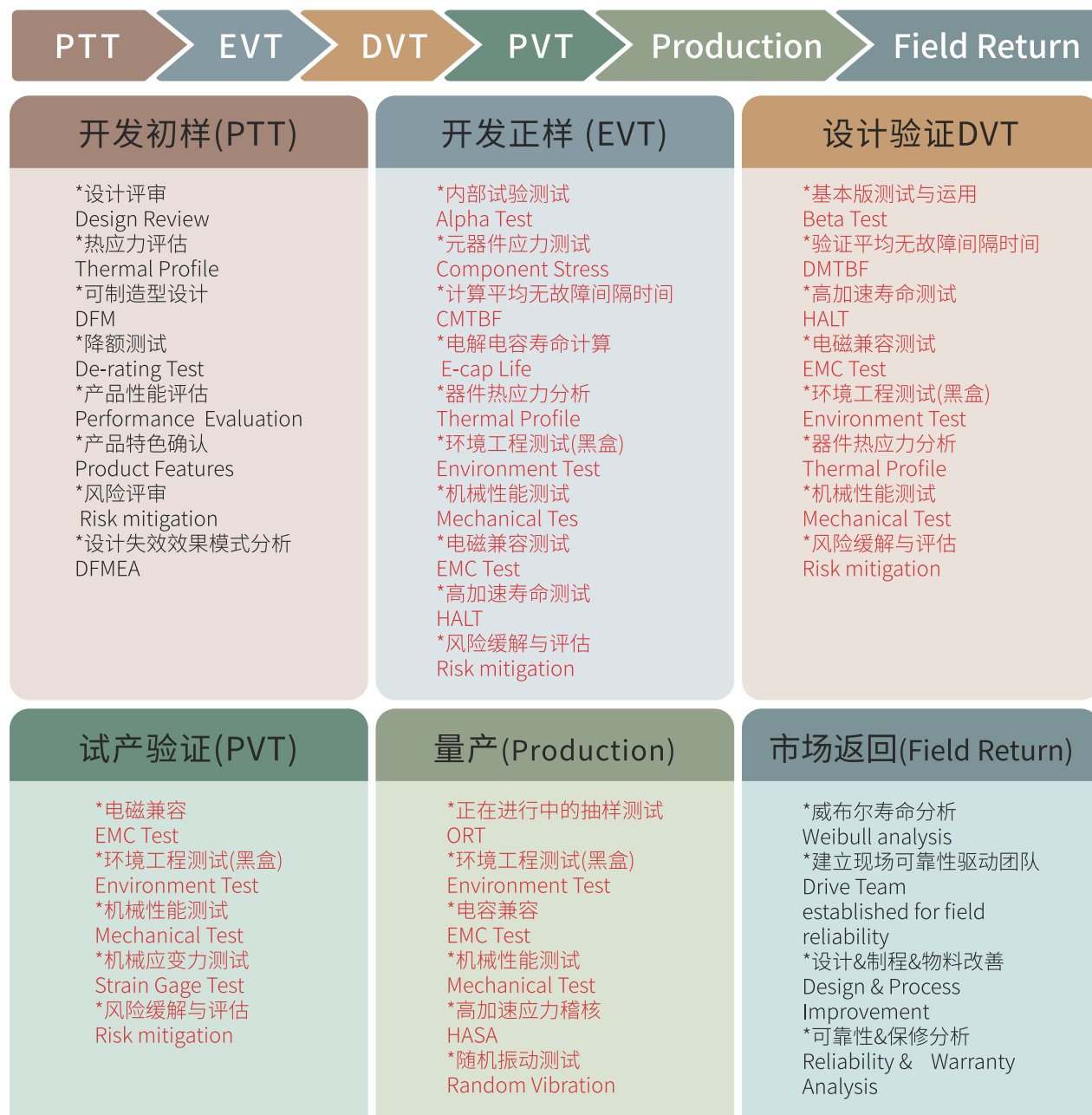
技术手册

注意:电源模块的各管脚定义如与选型手册不符,应以实物标签上的标注为准。
Note:If the definition of pin is not in accordance with the model selection manual, please refer to the label on actual item.

► 电源产品可靠性实验

产品可靠性包含可靠性设计、可靠性预计、可靠性分析、可靠性验证、可靠性实验，其中可靠度试验包含内容有环境试验、机械应力试验、耐气候测试试验、功能试验、EMC及安规试验等。

■ 产品在各个阶段运用到的可靠度试验项目



■ 参照标准(Reference standard)

GB T2421~GB T2424---中国国家标准；

IPC9592B---国际电子工业联接协会；

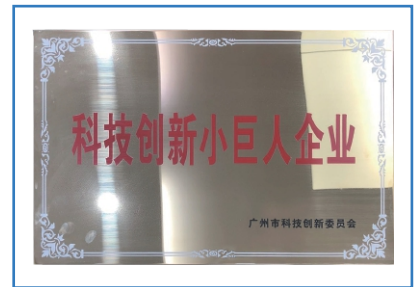
MIL-HDBK-217/251/781---美国军标；

Bellcore SR 332---美国贝尔通信实验室；

IEC60068---国际电工委员会；

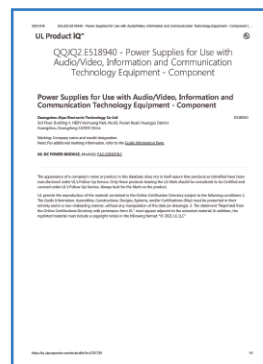
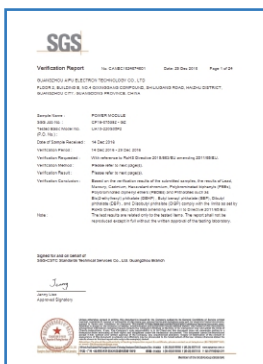
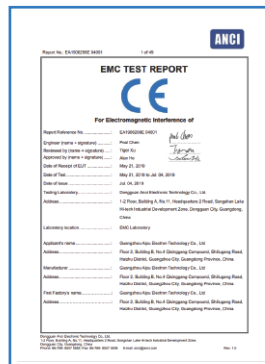
IPC-A-610F---国际电子工业联接协会；

资质证书





资质证书





敬天爱人 坚韧不拔
洁身自爱 奋发向上



广州市爱浦电子科技有限公司

GUANGZHOU AIPU ELECTRON TECHNOLOGY CO.,LTD

地址：广州市黄埔区埔南路63号七喜科创园4号楼3楼
Address: 3rd floor, Building 4, HEDY Kechuang Garden, No.63, Punan Road,
Huangpu District, Guangzhou city.

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