AC–DC CONVERTER

Part No.	Input Voltage(V)	Output Power(W)	Output Voltage(V)	Output Line	Packaging	Dimension
SAW03D	85–305	3	3.3/5/9 /12/15/24	1	DIP	25.4x25.4x17.6
SAW05D		5		1		25.4x25.4x17.6
SAW10D		10		1		39x25x22
SAW15D		15		1		47.6x26.8x23.5
SAW20D		20		1		52.4x27.2x24
SAW05H	85–264	5	3.3/5/9 /12/15/24	1,2	DIP	48.5x36x20.5
SAW10H		10		1,2		55x45x21
SAW15H		15		1,2		62x45x22.5
SAW20H		20		1,2		70x48x23.5
SAW03S	85–305	3	3.3/5/9 /12/15/24	1	SIP	26.4x17.6x11.1
SAW05S		5		1		26.4x17.6x11.1
SAW10S		10		1		32x20x15.3
SAW15S		15		1		32x20x15.3

AC–DC CONVERTER PIN DEFINITION

AC(N)	Null line
AC(L)	Live wire
+V0	+Output
COM	Common ground pins
–V0	–Output
TRIM	Output voltage regulation
⏚	Grounds
+V(CAP)	External capacitor positive electrode
NC	Nonfunctional Pins
No Pin	No Pins
–V(CAP)	External capacitor negative electrode

3W~20W AC-DC CONVERTER

FEATURES:

Packaging: DIP
Output voltage range: 85 – 305VAC
Operating Temperature:–40℃ – 70℃
The maximum efficiency can reach 85%
Isolation Voltage:4000VDC
With input undervoltage, output overcurrent, short circuit, over voltage protection

APPLICATION:

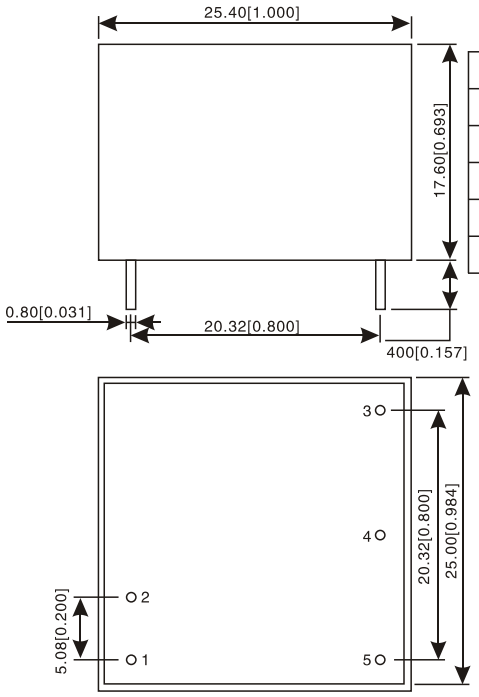
Electric power
Industrial control
Communication
IoT
Automobile

ELECTRICAL CHARACTERISTICS:

Part Number	Output Power (W)	Input Voltage(VAC)	Output Voltage/Current		Efficiency (%,Typ)	Capacitive Load,Max (uF)	
			Vo1/Io1	Vo2/Io2		Vo1	Vo2
SAW03D-23S03	2.97	85-305	3.3/900	–	73	6000	–
SAW03D-23S05	3	85-305	5/600	–	75	6000	–
SAW03D-23S09	3	85-305	9/333	–	76	1000	–
SAW03D-23S12	3	85-305	12/250	–	76	1000	–
SAW03D-23S15	3	85-305	15/200	–	78	330	–
SAW03D-23S24	3	85-305	24/125	–	79	100	–
SAW05D-23S03	5	85-305	3.3/1500	–	73	4000	–
SAW05D-23S05	5	85-305	5/1000	–	74	4000	–
SAW05D-23S09	5	85-305	9/560	–	75	820	–
SAW05D-23S12	5	85-305	12/450	–	75	820	–
SAW05D-23S15	5	85-305	15/300	–	77	330	–
SAW05D-23S24	5	85-305	24/208	–	79	100	–
SAW10D-23S03	6.6	85-305	3.3/2000	–	71	15000	–
SAW10D-23S05	10	85-305	5/2000	–	74	12000	–
SAW10D-23S09	10	85-305	9/1100	–	76	6000	–
SAW10D-23S12	10	85-305	12/833	–	77	2000	–
SAW10D-23S15	10	85-305	15/666	–	78	1500	–
SAW10D-23S24	10	85-305	24/416	–	80	470	–
SAW15D-23S03	9.9	85-305	3.3/3000	–	71	36000	–
SAW15D-23S05	14	85-305	5/2800	–	75	20000	–
SAW15D-23S09	15	85-305	9/1670	–	78	7200	–
SAW15D-23S12	15	85-305	12/1250	–	79	5200	–
SAW15D-23S15	15	85-305	15/1000	–	80	5000	–
SAW15D-23S24	15	85-305	24/625	–	83	820	–
SAW20D-23S03	13.53	85-305	3.3/4100	–	73	48000	–
SAW20D-23S05	17.5	85-305	5/3500	–	79	12240	–
SAW20D-23S09	20	85-305	9/2100	–	80	7200	–
SAW20D-23S12	20	85-305	12/1600	–	83	5400	–
SAW20D-23S15	20	85-305	15/1300	–	83	2720	–
SAW20D-23S24	20	85-305	24/850	–	84	1840	–

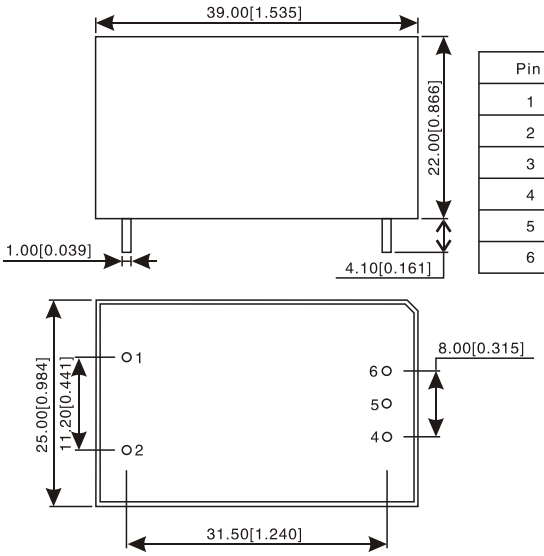
PHYSICAL CHARACTERISTICS:

SAW03D/05D Series:25.4x25.4x17.6(mm)



Pin	Definition
1	AC(N)
2	AC(L)
3	No Pin
4	–Vo
5	+Vo

SAW10D Series:39x25x22(mm)



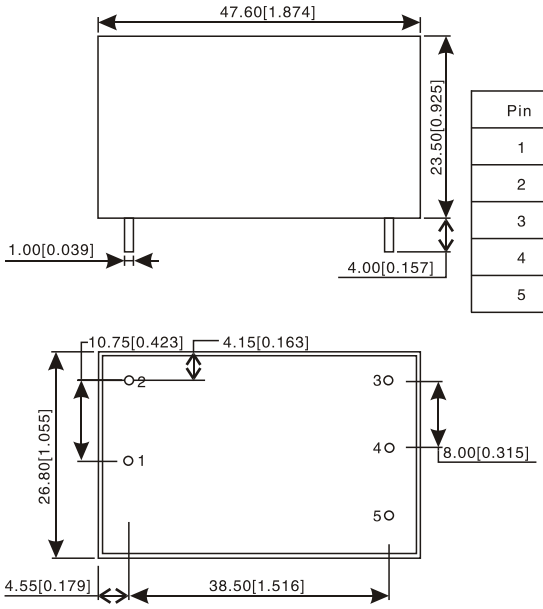
Pin	Definition
1	AC(N)
2	AC(L)
3	No Pin
4	+Vo
5	No Pin
6	–Vo

Dimensions:in mm

Terminal diameter tolerance: ±0.1[±0.004]

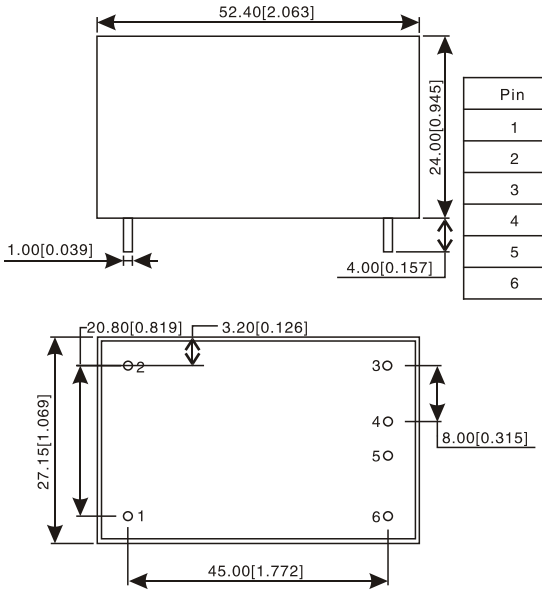
Unremarked tolerances: ±0.5[±0.02]

SAW15D Series:47.6x26.8x23.5(mm)



Pin	Definition
1	AC(N)
2	AC(L)
3	–Vo
4	+Vo
5	No Pin

SAW20D Series:52.4x27.15x24(mm)



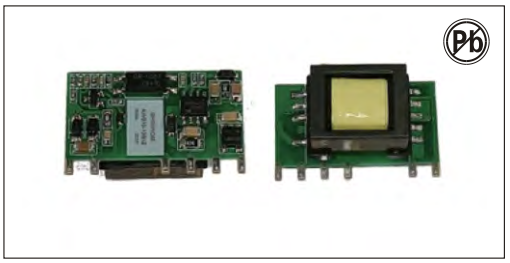
Pin	Definition
1	AC(N)
2	AC(L)
3	–Vo
4	+Vo
5	No Pin
6	No Pin

Dimensions:in mm

Terminal diameter tolerance: ±0.1[±0.004]

Unremarked tolerances: ±0.5[±0.02]

3W~15W AC-DC CONVERTER



FEATURES:

Packaging: SIP
Output voltage range: 85 – 305VAC
Operating Temperature:-40℃ – 70℃
The maximum efficiency can reach 85%
Isolation Voltage:3600VDC
With input undervoltage, output overcurrent, short circuit, over voltage protection

APPLICATION:

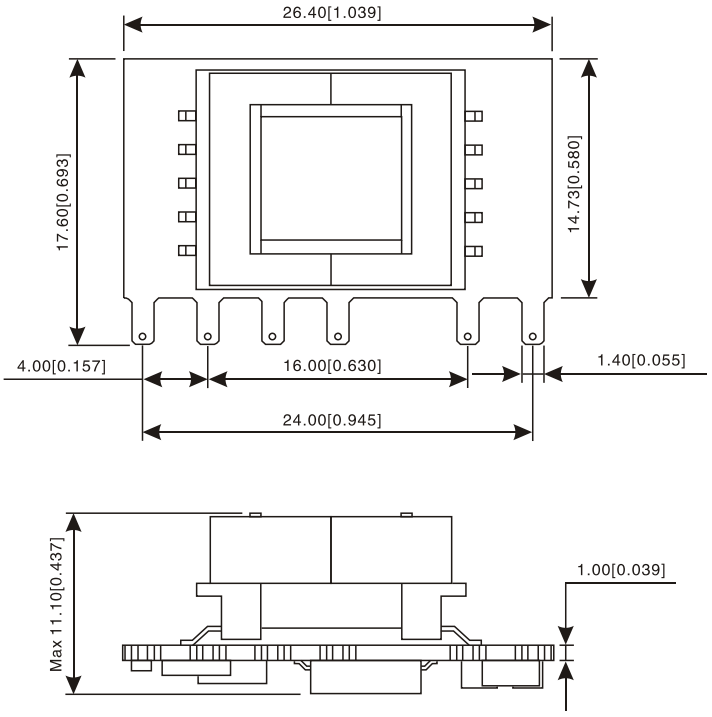
Electric power
Industrial control
Communication
IoT
Automobile

ELECTRICAL CHARACTERISTICS:

Part Number	Output Power (W)	Input Voltage(VAC)	Output Voltage/Current		Efficiency (%,Typ)	Capacitive Load,Max (uF)	
			Vo1/Io1	Vo2/Io2		Vo1	Vo2
SAW03S-13S03	1.98	85-305	3.3/600	–	67	6000	–
SAW03S-13S05	3	85-305	5/600	–	72	6000	–
SAW03S-13S09	3	85-305	9/333	–	75	1000	–
SAW03S-13S12	3	85-305	12/250	–	77	1000	–
SAW03S-13S15	3	85-305	15/200	–	78	330	–
SAW03S-13S24	3	85-305	24/125	–	80	100	–
SAW05S-13S03	3.3	85-305	3.3/1000	–	68	4000	–
SAW05S-13S05	5	85-305	5/1000	–	75	4000	–
SAW05S-13S09	5	85-305	9/560	–	76	820	–
SAW05S-13S12	5	85-305	12/420	–	78	820	–
SAW05S-13S15	5	85-305	15/340	–	78	330	–
SAW05S-13S24	5	85-305	24/210	–	80	100	–
SAW10S-13S03	6.6	85-305	3.3/2000	–	74	15000	–
SAW10S-13S05	10	85-305	5/2000	–	78	12000	–
SAW10S-13S09	10	85-305	9/1100	–	79	6000	–
SAW10S-13S12	10	85-305	12/840	–	83	2000	–
SAW10S-13S15	10	85-305	15/670	–	83	1500	–
SAW10S-13S24	10	85-305	24/420	–	83	470	–
SAW15S-13S03	9.9	85-305	3.3/3000	–	75	36000	–
SAW15S-13S05	14	85-305	5/2800	–	78	20000	–
SAW15S-13S09	15	85-305	9/1670	–	80	7200	–
SAW15S-13S12	15	85-305	12/1250	–	84	5200	–
SAW15S-13S15	15	85-305	15/1000	–	84	5000	–
SAW15S-13S24	15	85-305	24/625	–	85	820	–

PHYSICAL CHARACTERISTICS:

SAW03S/05S Series:26.4x17.6x11.1(mm)



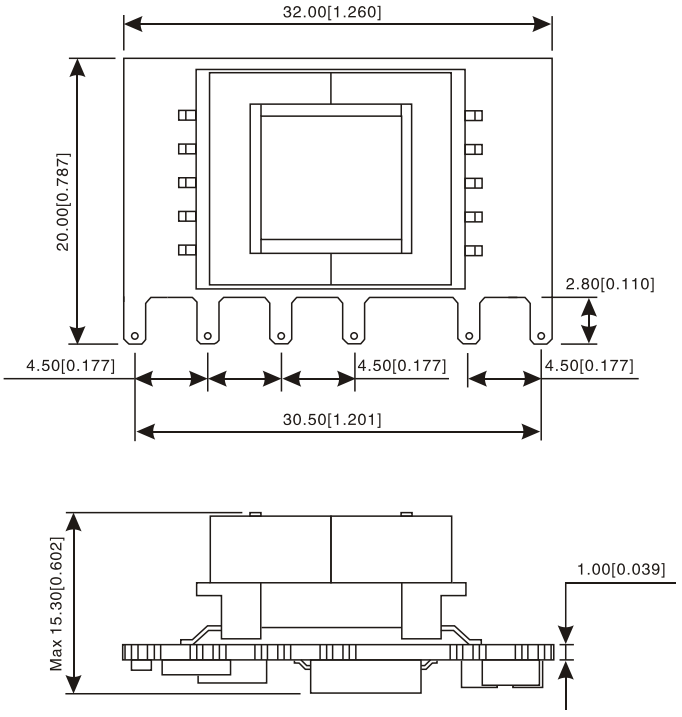
Pin	Definition
1	AC(L)
2	AC(N)
3	+Vo(CAP)
4	–Vo(CAP)
5	–Vo
6	+Vo

Dimensions:in mm

Terminal diameter tolerance: ±0.10[±0.004]

Unremarked tolerances: ±0.50[±0.020]

SAW10S/15S Series:32X20X15.3(mm)



Pin	Definition
1	AC(L)
2	AC(N)
3	+Vo(CAP)
4	–Vo(CAP)
5	–Vo
6	+Vo

Dimensions:in mm

Terminal diameter tolerance: ±0.10[±0.004]

Unremarked tolerances: ±0.50[±0.020]

5W~20W DC-DC CONVERTER

FEATURES:

Packaging: DIP
Output voltage range: 85 – 264VAC
Operating Temperature:-40℃ – 70℃
The maximum efficiency can reach 85%
Isolation Voltage:4000VDC
With input undervoltage, output overcurrent, short circuit, over voltage protection

APPLICATION:

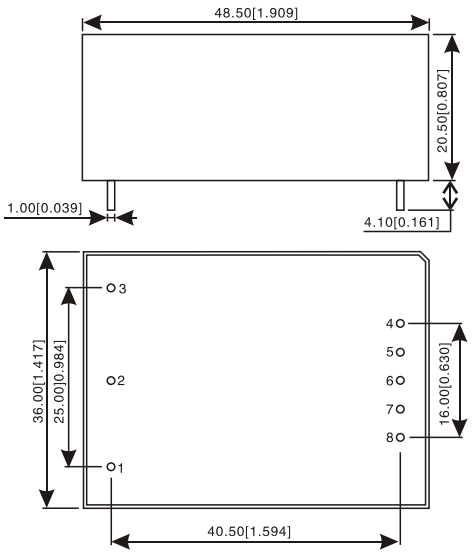
Electric power
Industrial control
Communication
IoT
Automobile

ELECTRICAL CHARACTERISTICS:

Part Number	Output Power (W)	Input Voltage(VAC)	Output Voltage/Current		Efficiency (%,Typ)	Capacitive Load,Max (uF)	
			Vo1/Io1	Vo2/Io2		Vo1	Vo2
SAW05H-20A0505	5	85-264	+5/500	-5/500	72	3000	3000
SAW05H-20A1212	5	85-264	+12/210	-12/210	75	680	680
SAW05H-20A1515	5	85-264	+15/160	-15/160	77	220	220
SAW05H-20D0505	5	85-264	5/900	5/100	70	2000	820
SAW05H-20D0512	5	85-264	5/750	12/100	71	1200	680
SAW05H-20D0515	5	85-264	5/700	15/100	72	1200	680
SAW05H-20D0524	5.4	85-264	5/600	24/100	73	470	100
SAW10H-20A0505	10	85-264	+5/1000	-5/1000	75	20000	20000
SAW10H-20A1212	10	85-264	+12/450	-12/450	79	10000	10000
SAW10H-20A1515	10	85-264	+15/350	-15/350	80	1200	1200
SAW10H-20D0505	10	85-264	5/1800	5/200	7	4000	1200
SAW10H-20D0512	10	85-264	5/1500	12/200	78	2000	1000
SAW10H-20D0515	10	85-264	5/1400	15/200	79	1500	820
SAW10H-20D0524	10	85-264	5/1000	24/200	80	1000	470
SAW15H-20A0505	15	85-264	+5/1500	-5/1500	75	5000	5000
SAW15H-20A1212	15	85-264	+12/650	-12/650	79	3200	3200
SAW15H-20A1515	15	85-264	+15/500	-15/500	80	2000	2000
SAW15H-20D0505	15	85-264	5/2000	5/800	75	6000	2000
SAW15H-20D0512	15	85-264	5/2000	12/400	78	6000	1000
SAW15H-20D0515	15	85-264	5/2000	15/400	78	6000	820
SAW15H-20D0524	15	85-264	5/2000	24/400	80	6000	470
SAW20H-20A1212	20	85-264	+12/830	-12/830	81	5000	5000
SAW20H-20A1515	20	85-264	+15/650	-15/650	83	2000	2000
SAW20H-20D0512	20	85-264	5/2500	12/600	78	12000	1500
SAW20H-20D0515	20	85-264	5/2500	15/500	79	12000	1200
SAW20H-20D0524	20	85-264	5/2500	24/300	79	12000	820

PHYSICAL CHARACTERISTICS:

SAW05H Series:48.5x36x20.5(mm)



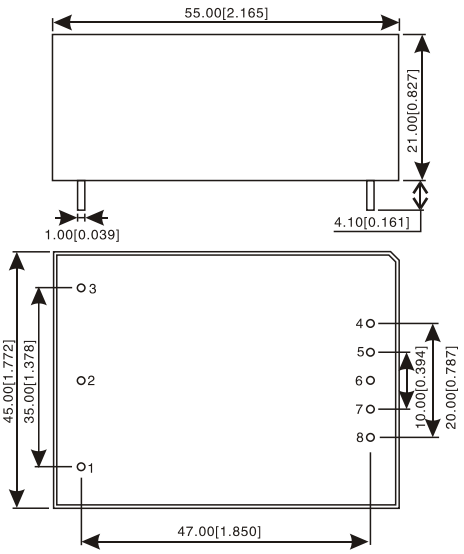
Pin	Definition			
	Single output	Dual output	Triple output	Isolated dual output
1	⏚	⏚	⏚	⏚
2	AC(N)	AC(N)	AC(N)	AC(N)
3	AC(L)	AC(L)	AC(L)	AC(L)
4	+Vo	+Vo	+Vo2	+Vo2
5	No Pin	No Pin	COM	-Vo2
6	No Pin	COM	-Vo2	No Pin
7	No Pin	No Pin	+Vo1	+Vo1
8	-Vo	-Vo	-Vo1	-Vo1

Dimensions:in mm

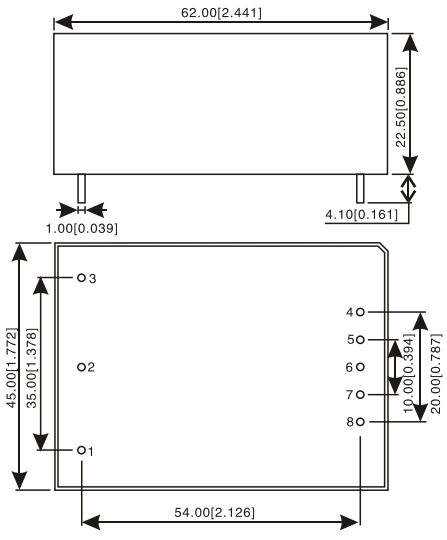
Terminal diameter tolerance:
±0.10[±0.004]

Unremarked tolerances:
±0.50[±0.020]

SAW10H Series:55x45x21(mm)



SAW15H Series:62X45X22.5(mm)



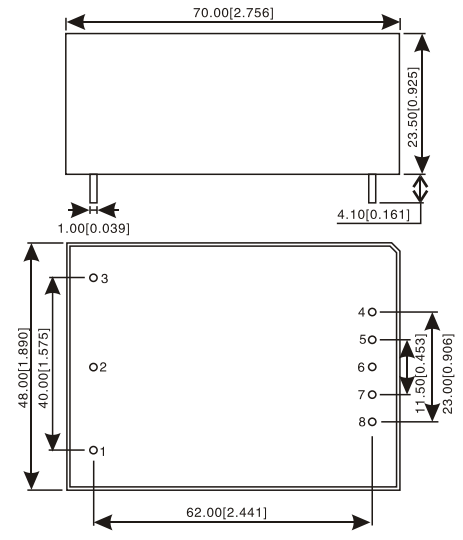
Pin	Definition			
	Single output	Dual output	Triple output	Isolated dual output
1	⏚	⏚	⏚	⏚
2	AC(N)	AC(N)	AC(N)	AC(N)
3	AC(L)	AC(L)	AC(L)	AC(L)
4	+Vo	+Vo	+Vo2	+Vo2
5	No Pin	No Pin	COM	-Vo2
6	No Pin	COM	-Vo2	No Pin
7	No Pin	No Pin	+Vo1	+Vo1
8	-Vo	-Vo	-Vo1	-Vo1

Dimensions:in mm

Terminal diameter tolerance:
±0.10[±0.004]

Unremarked tolerances:
±0.50[±0.020]

SAW20H Series:70x48x23.5(mm)



7W AC/DC-DC CONVERTER

SAW07S Series one is SHINHOM to provide customers with a small package form of high-performance module power supply, this series of power supply with AC and DC dual wide voltage input, built-in lightning and surge protection circuit, built-in pulse group attenuator, built-in differential mode, common mode filter, efficiency up to 88% (full series synchronous rectification) and less than 0.1W ultra-low no-load power consumption and other advantages. The power supply adopts vacuum potting package to prevent dust and moisture. This series of power supplies complies with EN55032 Class B Electromagnetic compatibility (EMC) characteristics and Class I isolation levels (safety regulations), and typical circuits can pass certification tests.

FEATURES:

- Global range of AC/DC input
- High efficiency, high power density
- Stabilized output voltage, low ripple noise
- Small size: 28*37*19mm
- Protection type: overload protection/Short circuit protection/overheat protection
- Built-in EMC circuit complies with EN55032 Class BClass II isolation level (safety regulations)
- Standby low power consumption, green environmental protection
- No need for peripheral circuit design, PCB welded plastic shell natural cooling

APPLICATION:

- Industrial electrical equipment
- Mechanical equipment
- Industrial automation equipment
- Handheld electronic device
- Wireless network
- Telecommunications/data communications
- Instrument and meter
- Intelligent field

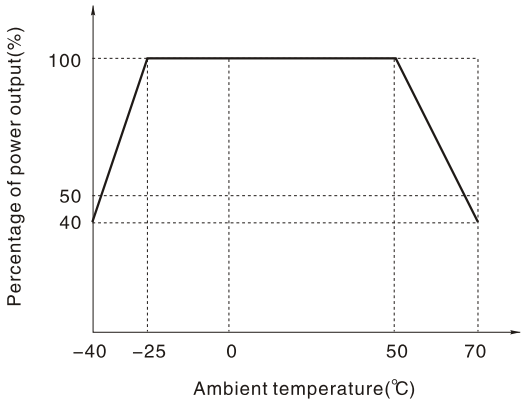
ELECTRICAL CHARACTERISTICS:

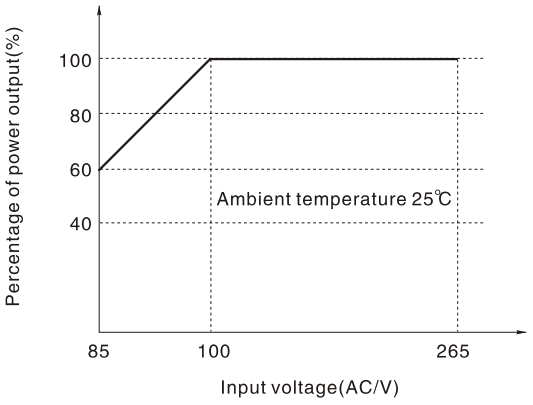
Part No.	Input						Output						Ripple and noise			
	Voltage range	Current @110V	Current @220V	Power factor	Start-up time	Attenuation rate	DC Volage	Rated current	Rated power	Efficiency (Typ)	Voltage accuracy	load regulation	20M bandwidth/ripple		200M bandwidth/noise	
													Typ	Max	Typ	Max
SAW07S-28S05	85-265Vac 100-375Vdc 50/60Hz	<100mA	<70mA	<0.58	<300ms	1-4KV >30dB	5V	1400mA	7W	82%	±1%	±1%	20mV	40mV	40mV	70mV
SAW07S-28S06							6V	1160mA		82%		±1%	20mV	46mV	40mV	70mV
SAW07S-28S09							9V	780mA		82%		±1%	20mV	46mV	40mV	70mV
SAW07S-28S12							12V	580mA		84%		±0.8%	20mV	30mV	45mV	70mV
SAW07S-28S15							15V	460mA		84%		±0.8%	20mV	30mV	45mV	70mV
SAW07S-28S20							20V	350mA		84%		±0.8%	40mV	70mV	46mV	85mV
SAW07S-28S24							24V	290mA		84%		±0.4%	40mV	70mV	46mV	85mV
Notes	1.Unless otherwise specified, all specifications are tested at input voltage 220VAC, full load, and ambient temperature of 25℃ 2.The recommended power is 20% to 70% of the rated power of the module (at @25℃)															

PRODUCT CHARACTERISTICS:

Item	Working condition
Switching frequency	65KHz
Short circuit protection	Long-term short circuit, self-recovery
Overload protection	> Load150%, recoverable
Overheat protection	The surface temperature of the module is 100 ℃ (±4℃), and it is protected from overheating
Hi-Pot	Input-Output 3000VAC /1min (withstand voltage test is limit damage test, can not be tested multiple times)
Operating temperature	-40~70℃ (Refer to temperature & Derating curve for details)
weight	39g(±2g)
Case Size	28*37*19mm
Case material	High temperature resistant plastic housing
Cooling mode	Natural cooling
Safety level	Class Ⅱ
Notes	Unless otherwise specified, all specifications are tested at input voltage 220VAC, full load, and ambient temperature of 25℃

ELECTRICAL CHARACTERISTICS:

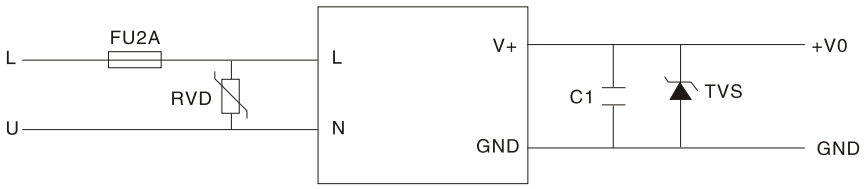




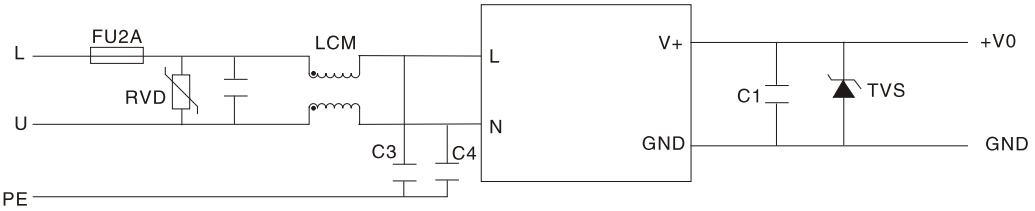
1. When the input voltage ranges from 85V to 100VAC, Converter must be derated
2. Ambient temperature < −25℃, or ambient temperature > When the temperature is 50℃, Converter must be derated
3. This product is suitable for use in a natural air−cooled environment. If it is needed in a sealed environment, it is necessary to consider the power usage of the module comprehensively.

APPLICATION CIRCUIT:

Typical application circuit



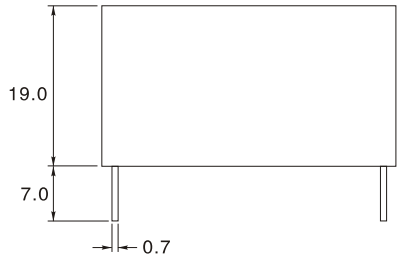
EMC enhanced recommendation circuit

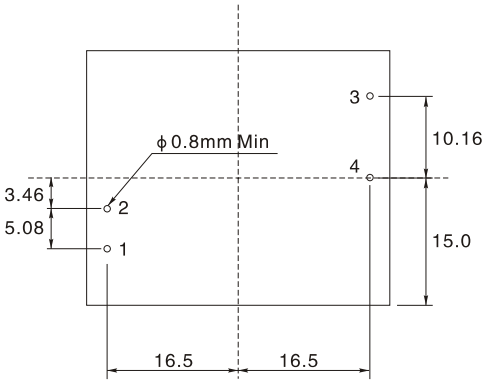


Part No.	FUSE	RVD	C2	LCM	C3,C4	C1	TVS
SAW07S−28S05	1A/250VAC	14D431K	0.33uF 275VAC	UU9.8 60mH	222M 250V	CBB capacitor 104/50V	5V: P6KE6.8A 12V: P6KE15A 24V: P6KE28A
SAW07S−28S06							
SAW07S−28S09							
SAW07S−28S12							
SAW07S−28S15							
SAW07S−28S20							
SAW07S−28S24							

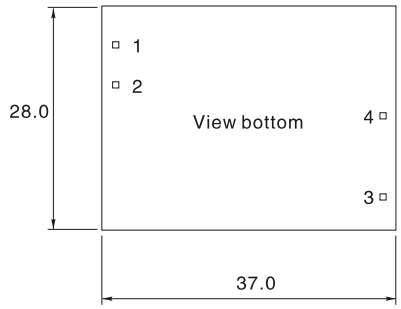
1. SAW07S series module has built−in EMC circuit, can directly pass the certification test. If you need to use in a complex power supply environment, need refer to the technical manual to build a peripheral EMC enhanced circuit, otherwise the product has the risk of damage.
2. FUSE is the input fuse. Select a slow−break fuse that has safety certification. For details, see the recommended value in the technical manual.
   (Note: If the rated current value of the fuse is too large, it can not play a protective role, and if it is too small, it is easy to cause misfuse due to the input capacitor charging when starting.)
3. MOV is a varistor, which protects the surge voltage of the product input. It is recommended to refer to the corresponding technical manual parameters for the selection of varistor specifications.
4. C1 is a CBB capacitor, which removes high−frequency noise, and the recommended value is 104/50V.

SIZE AND PIN MODE:





Recommended pad



Pin mode	
Pin	
1	AC(V)
2	AC(L)
3	V0+
4	V0–

SA Series

50–150W AC/DC

SHINHOM
www.shinhom.com

特性 Features

- 宽电压输出范围
  Wide range of input voltage
- 输入宽频噪声滤波
  Broadband noise filter of input
- 输入浪涌电流抑制电路
  Surge suppress circuit of input
- 符合UL 1950、IEC950 安全规程
  Comply with UL 1950,IEC950 safety regulation
- 外型设计美观
  Attractive outline design
- 接线端子出线方式
  Terminal connection method
- 安装方便
  Easy installation
- 快速动态响应
  Fast dynamic response

输入特性 Input Characteristic

电压范围 (Voltage Range)	220 VAC 额定值)	85-264 VAC
反压保护 (Reverse Protection)	用应时外接熔丝 (Fuse Outside)	

环境特性(Environmental Characteristics)

工作壳温 (Case Temperature)	(工业品)-25-+85℃ (Industry)
	(军 I)-40-+85℃ (Military I)
	(军 II)-55-+85℃ (Military II)
存储温度 (Storage Temperature)	(工业品)-45-+105℃ (Industry)
	(军 品)-55-+105℃ (Military)

热阻特性 Heat Characteristic

冷却方式 (Cooling)	热 阻 (Thermal Resistance)
自然风冷 (Breeze of Nature)	2.50℃/W
0.5M/S	2.09℃/W
1M/S	1.56℃/W
1.5M/S	1.13℃/W
2M/S	0.94℃/W

一般特性 General Characteristic

工作频率 (Switching Frequency)	160-200	Khz
隔离电阻 (IsolationResistance)	500	MΩ
MTBF 绝缘强度(IsolationVoltage)	>500000	h
输入-输出 (Input-output)	>1500 VAC/1min (漏电流< 5mA)	
输入-外壳 (Input-Case)	>1500 VAC/1min (漏电流< 5mA)	
输出-外壳 (Output-Case)	>500 VDC/1min	

输出特性 Output Characteristic

电压精度 (Voltage Set-point Accuracy)	±1%
电压调整率 (Line Regulation)	±0.2%
负载调整率 (Load Regulation)	±0.4 %
温度变化率 (TemperatureCoefficient)	±0.01%/℃
电流限制点 (Output Current Limiting)	120% (Typ)
响应速度 (Dynamic Response)	200μs
输出电流 (Output Current)	2-6A 任选
输出电压 (Output Voltage)	1.8-48V
功率 (Power)	30-75W

SA Series

50–150W AC/DC

SHINHOM
www.shinhom.com

型号 Models SA 系列型号相同， SA为元件式

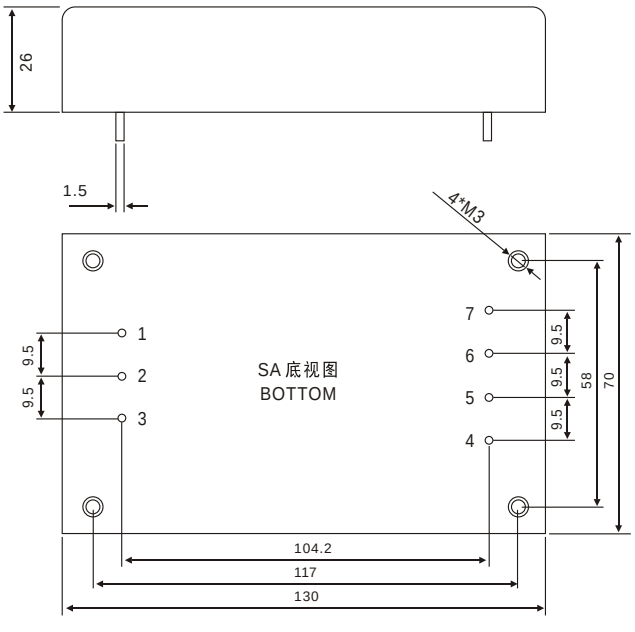
型号 Models	输入电压(Vdc) Input voltage		输入电压(范围) Input voltage(Range)	输出电压(Vdc) output voltage	输出电流(A) output current	纹波pk-pk(mv) Ripple and noise	效率(Typ) Efficiency
SA50-220S05 P1/P2	单路 Single	220	85-264	5	10	50	81%
SA50-220S12 P1/P2		220	85-264	12	4.17	120	83%
SA75-220S15 P1/P2		220	85-264	15	5	150	83%
SA100-220S24 P1/P2		220	85-264	24	4.2	200	84%
SA150-220S12 P1/P2		220	85-264	12	12.5	120	86%
SA150-220S27 P1/P2		220	85-264	27	5.56	200	85%

说明：公列出典型型号，其它型号，请确定功率、输入电压及输出电压，致电我公司。

Only typical models listed . Lf you need other model,please conform the power,input voltage and output voltage,then phone us.

外型尺寸图与引脚定义 Mechanical drawing and pin definition

SA---P1 series

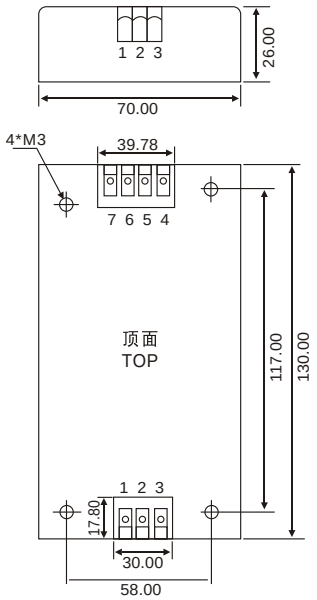


单位(Unit): mm

引脚 PIN	单路 SING
1	Gr.
2	Acin
3	Acin
4	+Vo
5	-Vo
6	NC
7	NC

Package A

SA---P2 series



单位(Unit): mm

引脚 PIN	单路 SING
1	Gr.
2	Acin
3	Acin
4	+Vo
5	-Vo
6	NC
7	NC

Package B

SAW Series

AC/DC

SHINHOM
www.shinhom.com

特性 Features

- 宽电压输入范围
  Wide range of input voltage
- 输入宽频噪声滤波
  Broadband noise filter of input
- 输入浪涌电流抑制电路
  Surge suppress circuit of input
- 符合UL 1950、IEC950 安全规程
  Comply with UL 1950,IEC950 safety regulation
- 外型设计美观
  Attractive outline design
- 引出脚功能兼容
  Pin function compatible
- 快速动态响应
  Fast dynamic response

输入特性 Input Characteristic

电压范围 (Voltage Range)	220 VAC 额定值)	85-264 VAC
反压保护 (Reverse Protection)	用应时外接熔丝 (Fuse Outside)	

环境特性(Environmental Characteristics)

工作壳温 (Case Temperature)	(工业品)-25-+85℃ (Industry)
	(军 I)-40-+85℃ (Military I)
	(军 II)-55-+85℃ (Military II)
存储温度 (Storage Temperature)	(工业品)-45-+105℃ (Industry)
	(军 品)-55-+105℃ (Military)

热阻特性 Heat Characteristic

冷却方式 (Cooling)	热 阻 (Thermal Resistance)
自然风冷 (Breeze of Nature)	2.50℃/W
0.5M/S	2.09℃/W
1M/S	1.56℃/W
1.5M/S	1.13℃/W
2M/S	0.94℃/W

一般特性 General Characteristic

工作频率 (Switching Frequency)	160-200	KHZ
隔离电阻 (IsolationResistance)	500	MΩ
MTBF 绝缘强度(IsolationVoltage)	>500000	h
输入-输出 (Input-output)	>1500 VAC/1min (漏电流< 5mA)	
输入-外壳 (Input-Case)	>1500 VAC/1min (漏电流< 5mA)	
输出-外壳 (Output-Case)	>500 VDC/1min	
主路-副路 (Main-Vice)	>500 VDC/1min	

输出特性 Output Characteristic

电压精度 (VoltageSet-po intAccura cy)	±1%
输出电压调整范围 (OutputVoltag e Range)	±10%
电压调整率(主路) (LineRegul ation<main>)	±0.2 %
负载调整率(主路) (Load Regulation<main>)	±0.4%
温度变化率 (Temperature Coefficient)	±0.01%/℃
交叉调节率 (主路30%-100%负载，副路80% 负载) (Cross Regulation)	±3%
电流限制点 (OutputCurrentLimiting)	120%(Typ)
响应速度 (DynamicRespo nse)	400μs
输出电流 (OutputCurrent)	2-5A任选
输出电压 (OutputVoltag e)	1.8-48V
功率 (Power)	75-150W

SAW Series

AC/DC

SHINHOM
www.shinhom.com

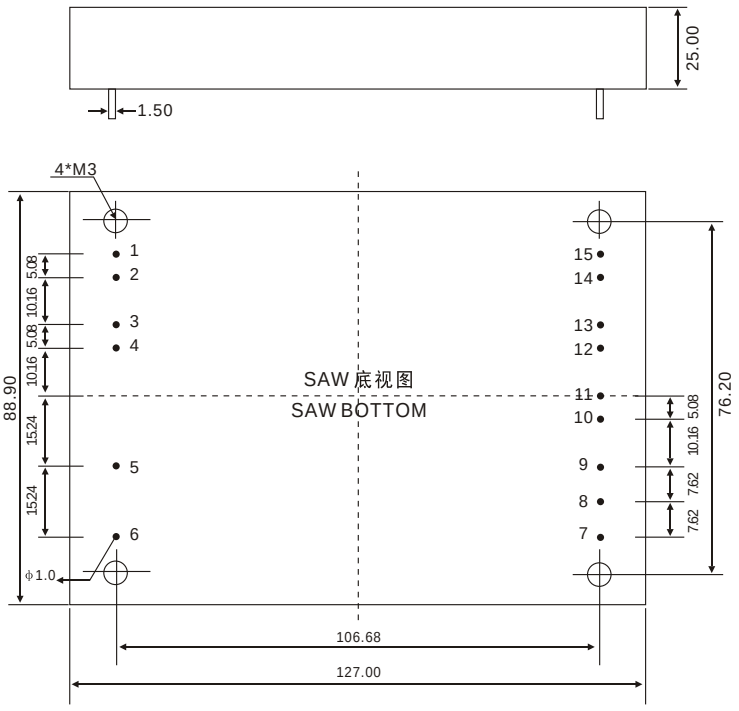
型号 Models

型号 Models	输入电压(Vdc) Input voltage		输入电压(范围) Input voltage(Range)	输出电压(Vdc) output voltage	输出电流(A) output current	纹波pk-pk(mv) Ripple and noise	效率(Typ) Efficiency
SAW150-220S12	双路 Dual	220	85-264	12	12.5	120	86%
SAW150-220S27		220	85-264	27	5.56	200	85%
SAW75-220D15&15	单路 Single	220	85-264	15/15	2.5/2.5	150/150	84%
SAW75-220D05%12		220	85-264	5/12	5/4.2	50/120	82%
SAW75-220D12&12		220	85-264	12/12	3.12/3.12	120/120	84%

说明：仅列出典型型号，其它型号，请确定功率、输入电压及输出电压，致电我公司。

Only typical models listed . Lf you need other model,please conform the power,input voltage and output voltage,then phone us.

外型尺寸图与引脚定义 Mechanical drawing and pin definition



单位(Unit): mm

引脚 PIN	单路 SING	双路 Dual
1	AC	AC
2	NC	NC
3	NC	NC
4	AC	AC
5	Gr.	Gr.
6	NC	NC
7	-SENSE	-SENSE
8	TRIM	TRIM
9	+SENSE	+SENSE
10	NC	Vo2
11	NC	Vo2
12	-Vo	GND
13	-Vo	GND
14	+Vo	Vo1
15	+Vo	Vo1

Series SWAC15

15 Watt | AC-DC / DC-DC Converter

FEATURES:

- I/O Isolation 3000VAC
- Operating Temp: -25˚C to +70˚C
- Input: 85-264VAC, 47-63Hz, or 120-370VDC
- Over current, Over Voltage Protection
- Continuous Short circuit protection
- Energy Star compliant
- Compact package
- Efficiency up to 84%

Models
Single output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
SWAC15-3.3S	85-264/47-63	120-370	3.3	3	72000	73
SWAC15-5S	85-264/47-63	120-370	5	2.8	44800	76
SWAC15-9S	85-264/47-63	120-370	9	1.6	13760	78
SWAC15-12S	85-264/47-63	120-370	12	1.25	5200	80
SWAC15-15S	85-264/47-63	120-370	15	1	5120	80
SWAC15-24S	85-264/47-63	120-370	24	0.625	880	84
SWAC15-48S	85-264/47-63	120-370	48	0.312	330	80

Models
Dual output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
SWAC15-5D	85-264/47-63	120-370	±5	±1.5	±12800	76
SWAC15-12D	85-264/47-63	120-370	±12	±0.65	±2350	81
SWAC15-15D	85-264/47-63	120-370	±15	±0.5	±3120	83
SWAC15-24D	85-264/47-63	120-370	±24	±0.31	±400	83

Models
Triple output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Auxiliary Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
SWAC15-505T	85-264/47-63	120-370	5	±5	2/±0.5	10800/±2160	75
SWAC15-512T	85-264/47-63	120-370	5	±12	2/±0.2	17280/±2160	77
SWAC15-515T	85-264/47-63	120-370	5	±15	1.8/±0.2	5920/±370	78
SWAC15-524T	85-264/47-63	120-370	5	±24	2/±0.1	1600/±130	78

Models
Asymmetric Separated Dual output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (μF)	Efficiency 230VAC (%)
SWAC15-505D	85-264/47-63	120-370	5/5	2.2/0.8	10800/2960	76
SWAC15-512D	85-264/47-63	120-370	5/12	2/0.4	8640/1200	80
SWAC15-515D	85-264/47-63	120-370	5/15	2/0.3	6480/800	80
SWAC15-524D	85-264/47-63	120-370	5/24	2/0.2	12900/800	81
SWAC15-1205D	85-264/47-63	120-370	12/5	1/0.4	2200/1200	78

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current (full load)	115 VAC		370	mA
	230 VAC		220	mA
Inrush current <2ms (cold start)	115 VAC	10		A
	230 VAC	20		A
Leakage current	230VAC/50Hz		0.3	mA
External fuse	Recommended slow blow type	2		A

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	Full load, main output	±0.5		%
	Full load, auxiliary output	±1.5		%
Load regulation (single output)	10-100% load	±1		%
Load Regulation (dual output)	10-100% Balanced load	±2		%
Load Regulation (triple & asymmetric separated output)	10-100% Balanced load, main output	±3		
	10-100% Balanced load, auxiliary output	±5		
Minimum load	Single output	0		%
	Others	10		%
Ripple & Noise *		50	150	mV p-p
Hold-up time	115VAC, 20MHz bandwidth	15		ms
	230VAC, 20MHz bandwidth	80		ms

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		3000	VAC
Isolation voltage between Main and Auxiliary output	60 sec		500	VDC
Isolation Resistance		>1000		MΩ

General Specifications

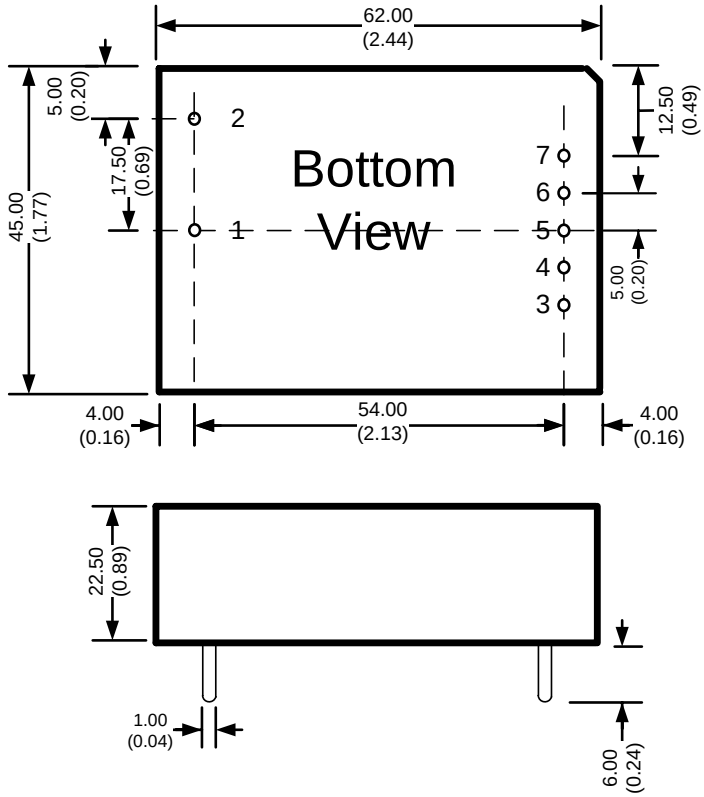
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	65		KHz
Protection class	Class II			
Over current protection		≥110		% of Iout
Over voltage protection	Zener diode clamp			
Short circuit protection	Continuous, Auto recovery			
Operating temperature	See derating curve	-25 to +70		ºC
Storage temperature		-25 to +105		ºC
Maximum Case temperature			100	ºC
Temperature coefficient		±0.02		% / ºC
Cooling	Free air convection			
Humidity	Non condensing		95	% RH
Case material	Plastic (flammability to UL 94V-0)			
Weight	Pin mountable	85		g
Dimensions (L x W x H)	Pin mountable: 2.44 x 1.77 x 0.89 inches 62.0 x 45.0 x 22.5 mm			
MTBF	> 300,000 hrs (MIL-HDBK -217F, t=+25ºC)/Full Load			

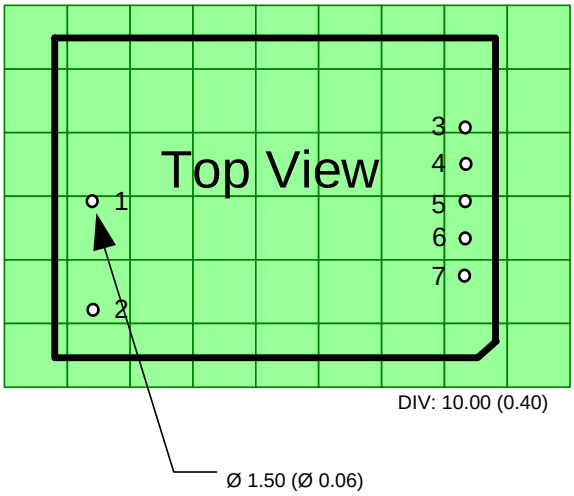
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

Parameters		
Agency approvals	cULus (single output models and AME15-505TCJZ, AME15-512TCJZ only), CE	
Standards	Information technology Equipment	IEC/EN/UL 60950-1
	EMI - Conducted and radiated emission	EN55022, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Level 3
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 Level 3
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 Level 3
	Surge Immunity	IEC 61000-4-5 Level 3
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 Level 3
	Power frequency Magnetic Field Immunity	IEC 61000-4-8 Level 3
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 Class 2

Dimensions



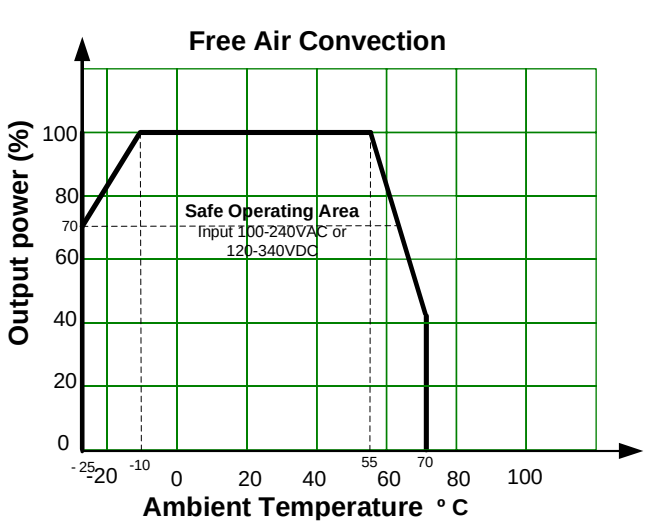


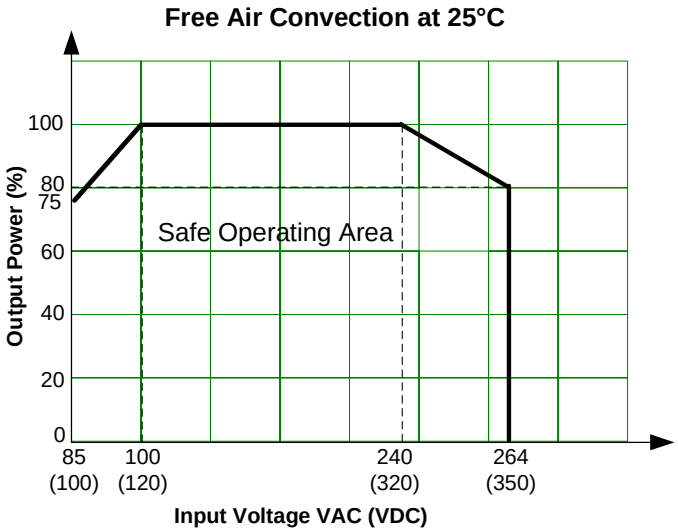
Dimensions mm (inch)
Case Tolerance ±0.50 (±0.02)
Pin Diameter 1.0 ± 0.10 (0.04 ± 0.004)

Pin Out Specifications

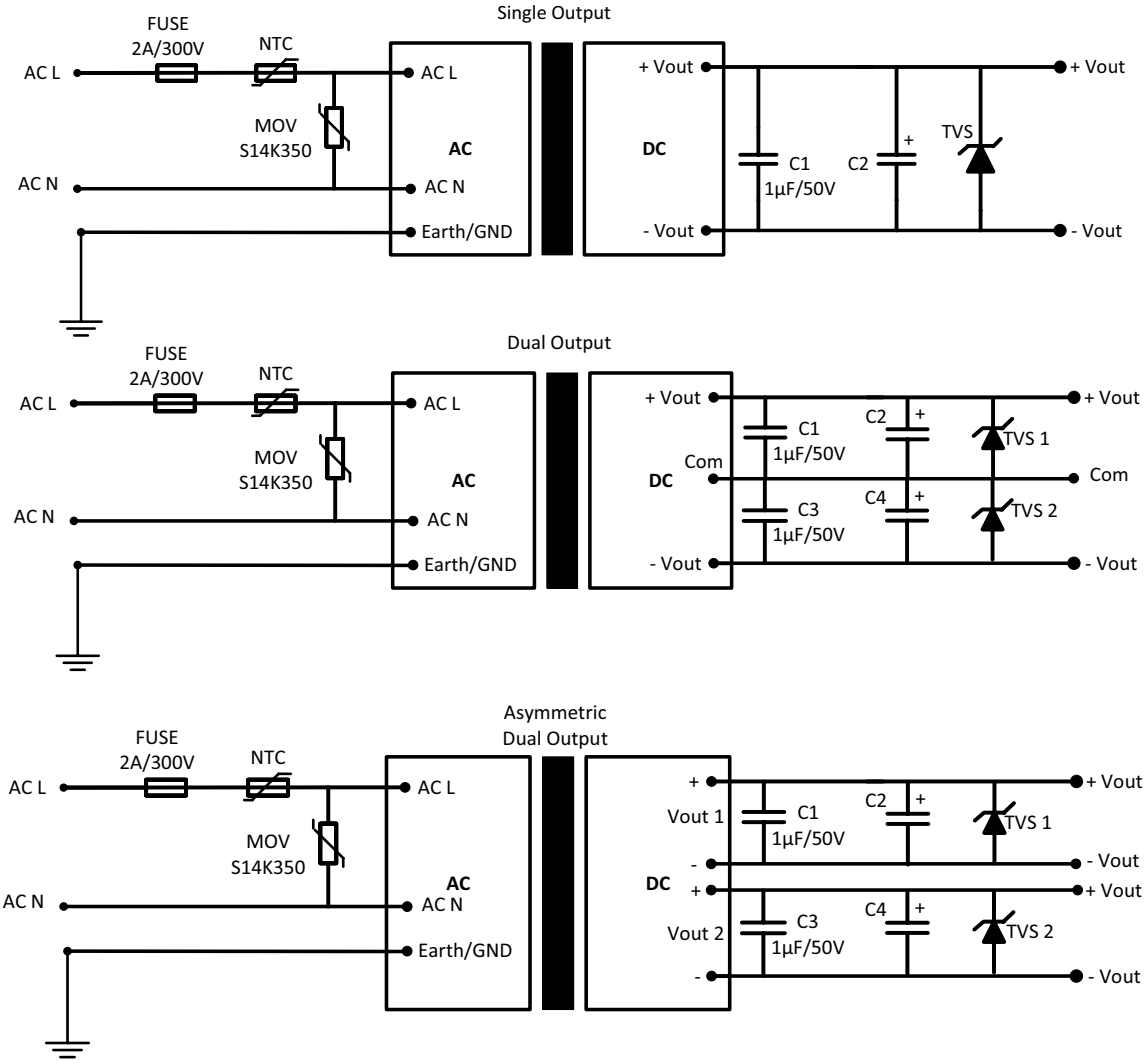
Pin	Single	Dual	Triple	Asymmetric Dual
1	AC Input (N)	AC Input (N)	AC Input (N)	AC Input (N)
2	AC Input (L)	AC Input (L)	AC Input (L)	AC Input (L)
3	-V Output	-V Output	-V Output 1	-V Output 1
4	No pin	No pin	+V Output 1	+V Output 1
5	No pin	Common	-V Output 2	No pin
6	No pin	No pin	Common	-V Output 2
7	+V Output	+V Output	+V Output 2	+V Output 2

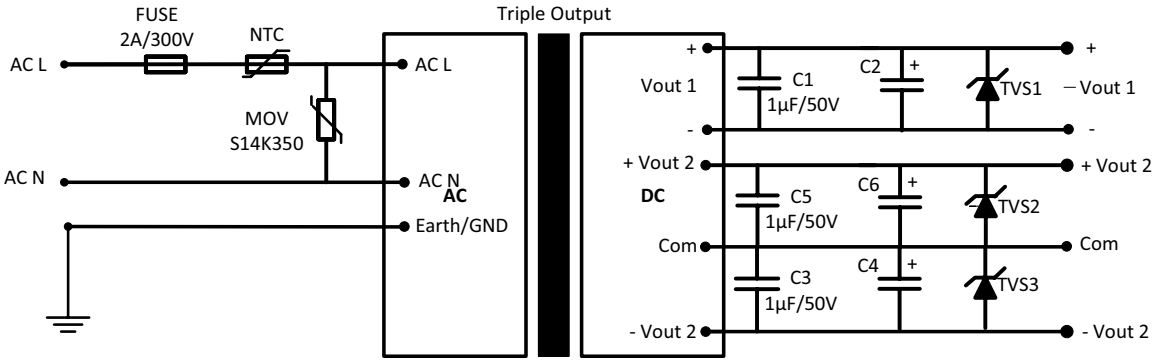
Derating





Typical application circuits





Model	C2	C4	C6	TVS1	TVS2	TVS3
Single 3.3 & 5 Vout	680 μF	-	-	7V	-	-
Single 9 Vout	470 μF	-	-	12V	-	-
Single 12 & 15 Vout	220 μF	-	-	20V	-	-
Single 24 Vout	68 μF	-	-	30V	-	-
Dual ±5 Vout	470 μF	470 μF	-	7V	7V	-
Dual ±12 Vout	220 μF	220 μF	-	20V	20V	-
Dual ±15 Vout	120 μF	120 μF	-	20V	20V	-
Dual ±24 Vout	68 μF	68 μF	-	30V	30V	-
Triple 5/±5 Vout	470 μF	220 μF	220 μF	7V	7V	7V
Triple 5/±12 Vout	470 μF	120 μF	120 μF	7V	20V	20V
Triple 5/±15 Vout	470 μF	120 μF	120 μF	7V	20V	20V
Triple 5/±24 Vout	470 μF	120 μF	120 μF	7V	30V	30V
Dual 5/5 Vout	470 μF	470 μF	-	7V	7V	-
Dual 5/12 Vout	470 μF	220 μF	-	7V	20V	-
Dual 5/15 Vout	470 μF	120 μF	-	7V	20V	-
Dual 5/24 Vout	470 μF	47 μF	-	7V	30V	-

NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4.** All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. **5.** Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **6.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.

SWAC15AT Series

DESCRIPTION **15W 3KVAC Isolation Wide Input AC/DC Converters**

The rated output power of SWAC15 converters is 15W with wide input voltage range, for both AC input and DC input application. High reliability, precision, large power density, ultra-small size, no external heat sink required, stable output voltage and etc, with over current protection, EMI filter circuit, the rectifier filter circuit, 3000V isolation voltage, short circuit, overload, internal thermal protection. Widely used in telecommunications, industrial control, instrument, data acquisition, signal control and other electronic systems.

FEATURES

Universal input voltage range	Both for AC and DC input voltage	Wide input voltage:2:1 and 4:1
Fixed switching frequency	Overheat protection	Over current protection
Short circuit protection	RoHS compliant	Operating temperature: -40 to 70

SELECTION GUIDE

Part Number	Input Voltage		Output		Efficiency (Typ.) %	Recommend output external capacitor		
	Rated	Range values	Voltage VDC)	Current A		C1	C2	C3
	VAC)							
SWAC15AT-220S05	220(2:1)	165-265	5	3.00	76	0.1uF/50V	330uF/16V	/
SWAC15AT-220S12	220(2:1)	165-265	12	1.25	80	0.1uF/50V	220uF/25V	/
SWAC15AT-220S15	220(2:1)	165-265	15	1.00	81	0.1uF/50V	220uF/25V	/
SWAC15AT-220S24	220(2:1)	165-265	24	0.65	84	0.1uF/50V	100uF/35V	/
SWAC15AT-220D05	220(2:1)	165-265	±5	±1.5	76	0.1uF/50V	220uF/16V	/
SWAC15AT-220D12	220(2:1)	165-265	±12	±0.63	81	0.1uF/50V	100uF/25V	/
SWAC15AT-220D15	220(2:1)	165-265	±15	±0.5	83	0.1uF/50V	100uF/25V	/
SWAC15AT-220D05P05	220(2:1)	165-265	+5/+5	2.5/0.5	76	0.1uF/50V	330uF/16V	220uF/16V
SWAC15AT-220D05P12	220(2:1)	165-265	+5/+12	1.8/0.5	80	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220D05P15	220(2:1)	165-265	+5/+15	1.8/0.4	80	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220D05P24	220(2:1)	165-265	+5/+24	1.6/0.3	81	0.1uF/50V	330uF/16V	47uF/35V
SWAC15AT-220T05D05	220(2:1)	165-265	+5/±5	2.6/±0.2	75	0.1uF/50V	330uF/16V	220uF/16V
SWAC15AT-220T05D12	220(2:1)	165-265	+5/±12	2.0/±0.2	77	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220T05D15	220(2:1)	165-265	+5/±15	1.8/±0.2	78	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220T05D24	220(2:1)	165-265	+5/±24	1.6/±0.15	79	0.1uF/50V	330uF/16V	47uF/35V
SWAC15AT-220S03W	220(4:1)	85-265	3.3	3.00	76	0.1uF/50V	330uF/16V	/
SWAC15AT-220S05W	220(4:1)	85-265	5	3.00	76	0.1uF/50V	330uF/16V	/
SWAC15AT-220S12W	220(4:1)	85-265	12	1.25	80	0.1uF/50V	220uF/25V	/
SWAC15AT-220S12.5W	220(4:1)	85-265	12.5	1.2	80	0.1uF/50V	220uF/25V	/
SWAC15AT-220S15W	220(4:1)	85-265	15	1.00	81	0.1uF/50V	220uF/25V	/
SWAC15AT-220S24W	220(4:1)	85-265	24	0.65	84	0.1uF/50V	100uF/35V	/
SWAC15AT-220D05W	220(4:1)	85-265	±5	±1.50	76	0.1uF/50V	220uF/16V	/
SWAC15AT-220D12W	220(4:1)	85-265	±12	±0.63	81	0.1uF/50V	100uF/25V	/
SWAC15AT-220D15W	220(4:1)	85-265	±15	±0.50	83	0.1uF/50V	100uF/25V	/
SWAC15AT-220D05P05W	220(4:1)	85-265	+5/+5	2.5/0.5	76	0.1uF/50V	330uF/16V	220uF/16V
SWAC15AT-220D05P12W	220(4:1)	85-265	+5/+12	1.8/0.5	80	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220D05P15W	220(4:1)	85-265	+5/+15	1.8/0.4	80	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220D05P24W	220(4:1)	85-265	+5/+24	1.6/0.3	81	0.1uF/50V	330uF/16V	47uF/35V
SWAC15AT-220T05D05W	220(4:1)	85-265	+5/±5	2.6/±0.2	75	0.1uF/50V	330uF/16V	220uF/16V
SWAC15AT-220T05D12W	220(4:1)	85-265	+5/±12	2.0/±0.2	77	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220T05D15W	220(4:1)	85-265	+5/±15	1.8/±0.2	78	0.1uF/50V	330uF/16V	100uF/25V
SWAC15AT-220T05D24W	220(4:1)	85-265	+5/±24	1.6/±0.15	79	0.1uF/50V	330uF/16V	47uF/35V

All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

GENERAL CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation voltage	Input / Output 1 minute, leakage current 2mA		3000		VAC
Seismic	10~55Hz	5			G
Over-current protection	Full input range		Burp Automatic recovery		
Cooling	Free air convection				
Case material	Flame-retardant plastic				

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Startup voltage	220VAC In module(165V-265V)	165	220	265	VAC
Startup voltage	220VAC In module(85V-265V)	85	220	265	VAC
Start rising time	Non-capacitive load	20			ms

OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Voltage accuracy	Io=0.1…1.0 x Ionom Vi=Vi rated			±3	%
				±5	%
Line regulation	Vimin≤Vi≤Vimax		±0.5		%
Load regulation	Io=0.1…1.0 x Ionom Vimin≤ Vi≤Vimax		±1		%
Auxiliary voltage accuracy	Main Load and auxiliary load differ 25%,the auxiliary circuit of the load with at least 25%, the main circuit with the full load			±3	%
Ripple and noise	20MHz bandwidth			±1	%
Over-current protection	Vimin≤Vi≤Vimax	120			%
Switch frequency	Vimin≤Vi≤Vimax		100		Hz

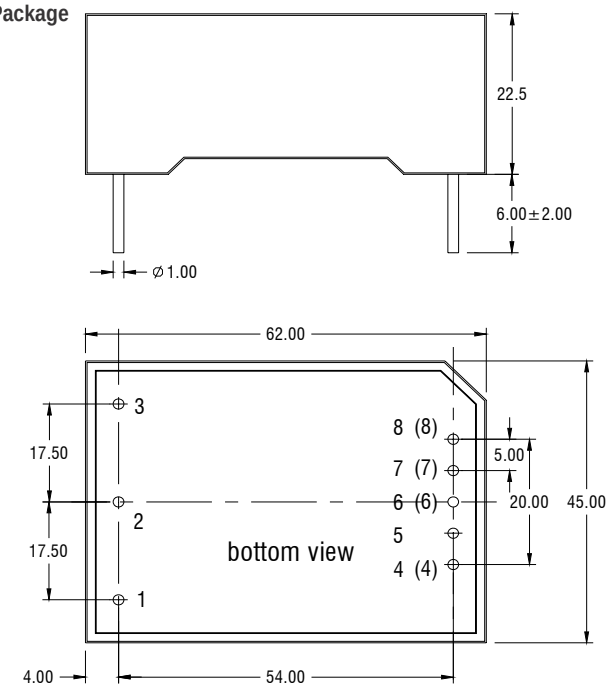
ENVIRONMENT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating temperature	industrial-class	-40		+70	
Maximum case temperature	industrial-class			+95	
Storage temperature	Industry-class	-40		+105	
Relative humidity	No condensation	5		90	RH(%
Temperature coefficient			±0.02		%/

Case temperature shall not exceed the maximum case temperature

MECHANICAL DIMENSIONS

DIP Package



unit: mm tolerance of PIN diameter ±0.10MM Unmarked tolerances :±0.50MM

PIN CONNECTIONS

Pin	Single output	Dual output (Com)	Dual output (NC)	Triple output
1	FG	FG	FG	FG
2	N	N	N	N
3	L	L	L	L
4	-V0	-V0	/	/
4	/	/	-V01	-V01
5	/	/	+V01	+V01
6	/	COM	/	/
6	/	/	/	-V02
7	/	/	-V02	/
7	/	/	/	COM
8	+V0	+V0	/	/
8	/	/	+V02	+V02

MODEL SELECTION

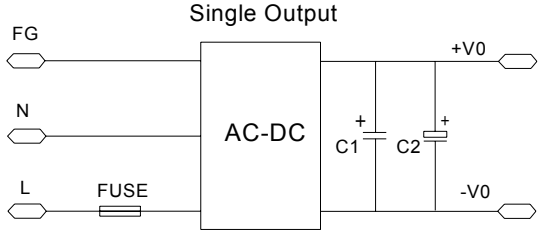
SWAC 15 A T 220 D 05 W
- W:4:1 Wide voltage input range
- Main (auxiliary) output voltage
- S:single output D:Dual output
- Rated input voltage
- Package type
- AC-DC
- Output rated power
- Series name

SWAC 15 A T 220 T 05 D 12 W
- W:4:1 Wide voltage input range
- Auxiliary output voltage
- D: Auxiliary is dual output
- Main output voltage
- S:single output D:Dual output T:Triple Output
- Rated input voltage
- Package type
- AC-DC
- Output rated power
- Series name

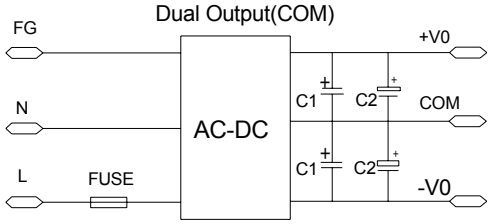
SWAC 15 A T 220 D 05 P 12 W
- W:4:1 Wide voltage input range
- Auxiliary Output Voltage
- P: Auxiliary is positive output voltage
- Main Road output voltage
- S:single output D:Dual output T:Triple OutpuS:
- Rated input voltage
- Package type
- AC-DC
- Rated output power
- Series name

RECOMMEND CIRCUIT

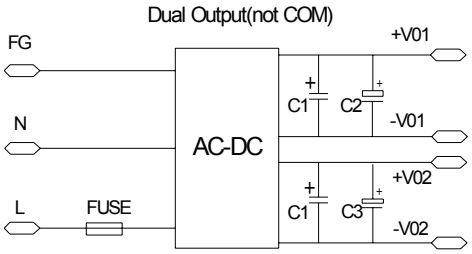
Single Output



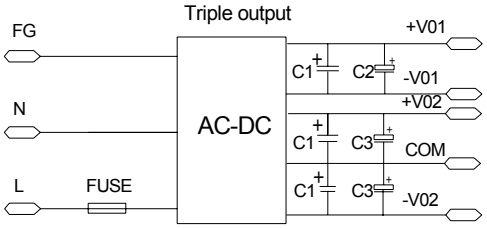
Dual Output(COM)



Dual Output(not COM)



Triple output



Notes 1. The value of C1 C2 C3 should refer to the output external capacitor table at page one

2. Fuse : 2A/250VAC slow-break type , must be connected

USING ATTENTIONS

- Module will cause irreversible damage when it in the long-term overload state.
- Module will cause irreversible damage when it out of the state maximum input voltage range

SWAC20-29 Series

Application

Industrial control and remote DC power supply systems, switching systems, A/D and D/A, railway communications, communication interface converters, cellular telephones, semiconductor lasers, display screens, monitors Control equipment, petrochemical, portable instrument, medical instrument, automatic control device, anti-theft alarm, handheld instrument, digital circuit, IC card meter, air conditioning computer controller, etc.

Product description

SWAC20-29 series is the latest series developed by our company Line products in ultra-small volume packages. This product has an ultra-wide input voltage of 165~510VAC, the volume is 72*50*25mm, and has the characteristics of high efficiency and low power consumption. The product meets the requirements of green environmental protection, and has the function of overcurrent and short circuit protection.

Feature

◎ Wide input range
◎ Efficiency typical value is greater than 80%
◎ Wide operating temperature range: industrial -25℃ ~ +85℃, military -40℃ ~ +85℃
◎ Isolation voltage 2500VAC
◎ International standard pin mode
◎ Metal shell flame-retardant package
◎ Comply with RoHS directive
◎ Heat dissipation mode: natural cooling
◎ Good shielding anti-interference performance and electromagnetic compatibility, output overcurrent, short circuit protection,
Overheat protection, self-recovery and other functions

SWAC20-29 Series

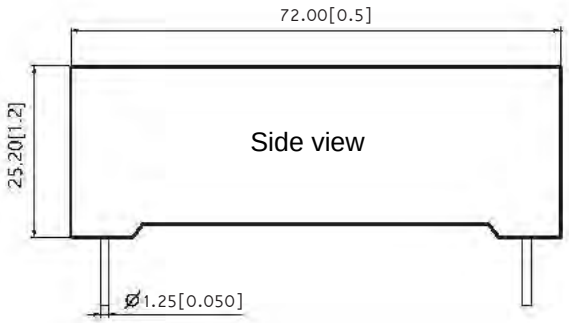
Part No	Input voltage (V)	Output voltage (V±2%)	Full load output Current (mA)	Efficiency ±3%	Weiht(g)	Encapsulation	Conform
SWAC20-29S3.3	165-510VAC (200-700VDC)	3.3	6060	≥77%	37	DIP	ROHS
SWAC20-29D3.3		±3.3	±3030	≥77%	37	DIP	
SWAC20-29S05		5	4000	≥77%	37	DIP	
SWAC20-29D05		±5	±2000	≥77%	37	DIP	
SWAC20-29S09		9	2222	≥78%	37	DIP	
SWAC20-29D09		±9	±1111	≥78%	37	DIP	
SWAC20-29S12		12	1666	≥78%	37	DIP	

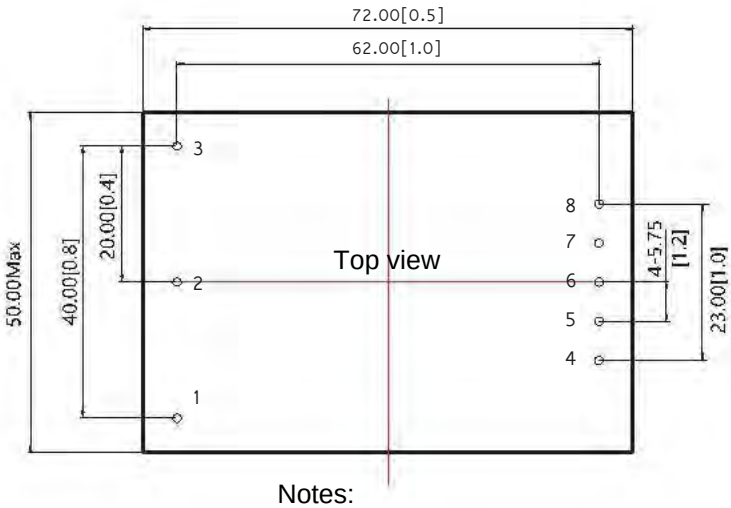
SWAC20-29D12	165-510VAC (200-700VDC)	±12		±833		≥79%	37	DIP	ROHS
SWAC20-29S15		15		1333		≥81%	37	DIP	
SWAC20-29D15		±15		±666		≥81%	37	DIP	
SWAC20-29S24		24		833		≥80%	37	DIP	
SWAC20-29D24		±24		±416		≥80%	37	DIP	
SWAC20-29S48		48		416		≥80%	37	DIP	
SWAC20-29D48		±48		±208		≥80%	37	DIP	
SWAC20-29TD0505	165-510VAC (200-700VDC)	5(±2%)	5(±5%)	2000	2000	≥78%	37	DIP	
SWAC20-29TD0512		5(±2%)	12(±5%)	2000	833	≥78%	37	DIP	
SWAC20-29TD0515		5(±2%)	15(±5%)	2000	666	≥78%	37	DIP	
SWAC20-29TD0524		5(±2%)	24(±5%)	2000	416	≥80%	37	DIP	
SWAC20-29TD1205		12(±2%)	5(±5%)	1000	1600	≥80%	37	DIP	
SWAC20-29TD1212		12(±2%)	12(±5%)	833	833	≥80%	37	DIP	
SWAC20-29TD1224		12(±2%)	24(±5%)	833	416	≥80%	37	DIP	
SWAC20-29TD2405		24(±2%)	5(±5%)	750	400	≥80%	37	DIP	
SWAC20-29TD2412		24(±2%)	12(±5%)	500	666	≥76%	37	DIP	
SWAC20-29M051212	165-510VAC (200-700VDC)	+5(±2%)	-12(±5%)	+12(±5%)	+2000	+416	-416	≥80%	37	DIP	
SWAC20-29M051212		+5(±2%)	-12(±5%)	+12(±5%)	+1600	-500	+500	≥80%	37	DIP	
SWAC20-29M051212		+5(±2%)	-12(±5%)	+12(±5%)	+1200	-583	+583	≥80%	37	DIP	
SWAC20-29M051515		+5(±2%)	-15(±5%)	+15(±5%)	+2000	-333	+333	≥80%	37	DIP	
SWAC20-29M241215		+24(±2%)	-12(±5%)	+15(±5%)	+500	-333	+266	≥80%	37	DIP	

Electrical characteristics					
Parameters	Unit	Condition Vi ,-25℃≤Tc≤85℃	limiting value		Unit
			Min	Max	
Output voltage	Vo	full-load	Vo-2%	Vo+2%	V
Max Output Current	Iomax	–	–	Po/Vo	A
Output ripple voltage	Vp-p	full-load Vi，BW=20MHz Ordinary temperature	–	≤V0±2%	mV
Voltage regulation rate	Sv	Vimin、Vi、Vimax full-load	–	2.00	%
Load Regulation rate	Si	Vi，Io=(0%~100%)Iomax	–	1.00	%
Efficiency	η	Vi full-load Ordinary temperature	80.00	–	%
Insulation resistance	RI	Vin- / Vout G @2500ACV t≥3S	50	–	MΩ

General characteristics		
EMC	Magnetic susceptibility experimentation	GB6833.2-87
	Electrostatic discharge experimentation	GB6833.3-87
	Radiated Susceptibility experimentation	GB6833.5-87
	Conducted susceptibility experimentation	GB6833.6-87
Temperature drift	0.02%/℃	
Frequency	47HZ~63HZ （MAX）	
Humidity	95% （max）	
Leakage current	–	
MTBF	>2,000,000 Hour	

Markings and Dimensions

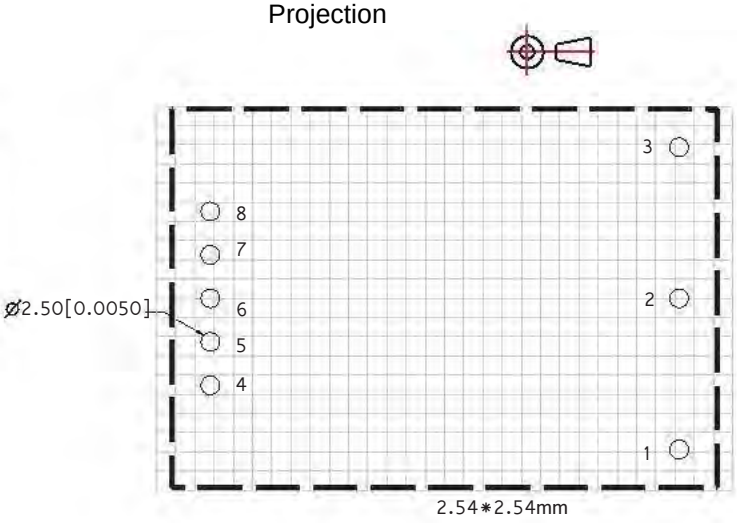




Notes:

1. Unit : mm (inch)
2. Terminal diameter tolerance: ±0.1 (±0.004)
3. No tolerance marked: ±0.5 (±0.020)

Projection

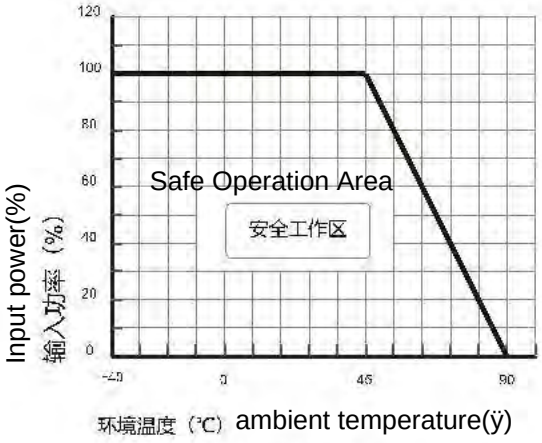


Pin Definition				
Pin	(1)	(2)	(3)	(4)
1	L(+)	L(+)	L(+)	L(+)
2	N(-)	N(-)	N(-)	N(-)
3	FG	FG	FG	FG
4	+XXVDC	+XXVDC3	+XXVDC	+XXVDC2
5	/	COM	/	0V2
6	COM	-XXVDC1	/	/
7	/	+XXVDC1	/	+XXVDC1
8	-XXVDC	0V1	0V	0V1

Notes: XXVDC Output voltage XX V

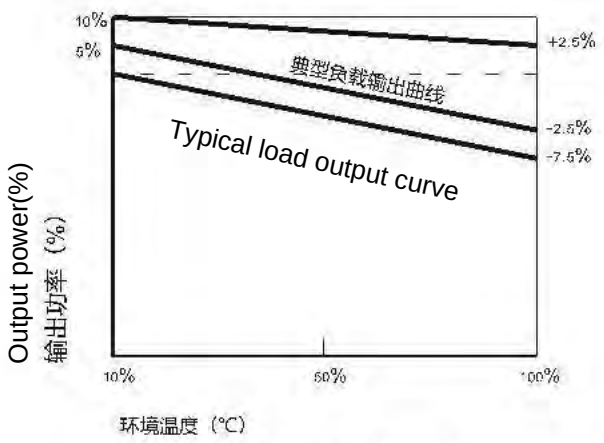
Temperature profile

Typical efficiency chart



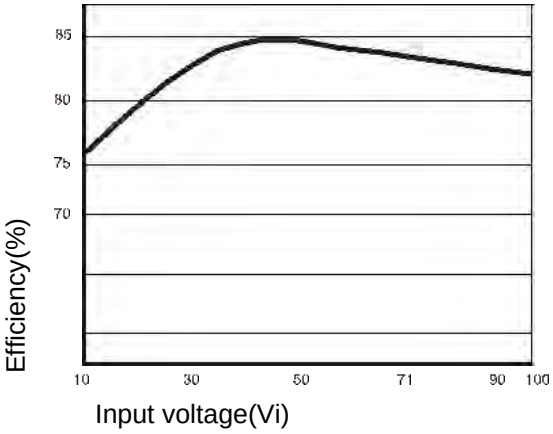
温度曲线图

Error envelope curve

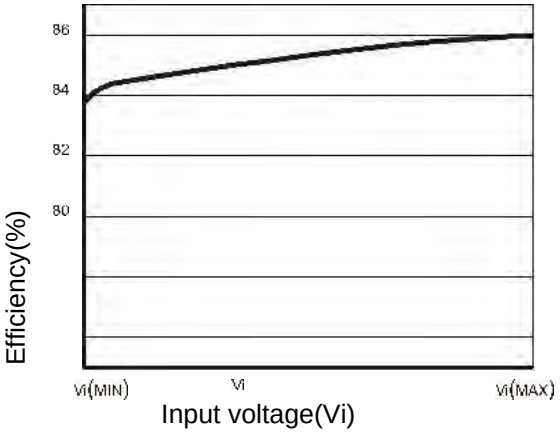


误差包络曲线图

Typical efficiency curve

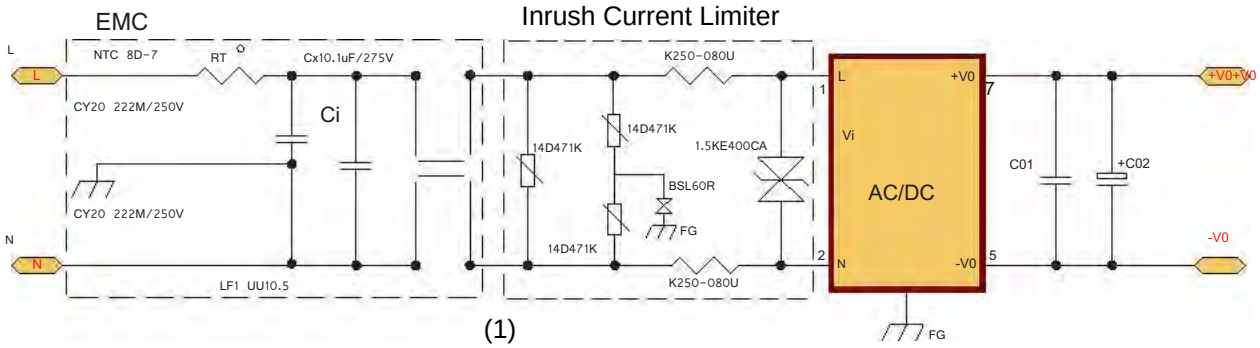


Efficiency/Load curve

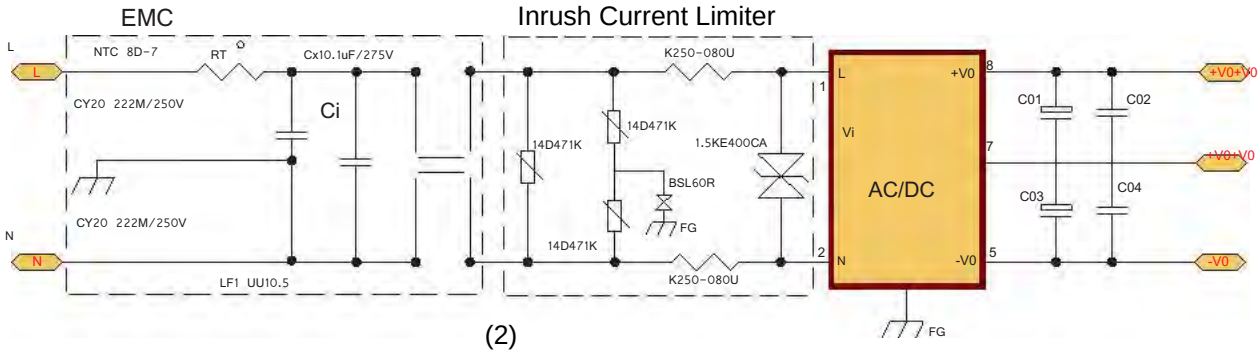


Efficiency/Input voltage

Typical application circuit

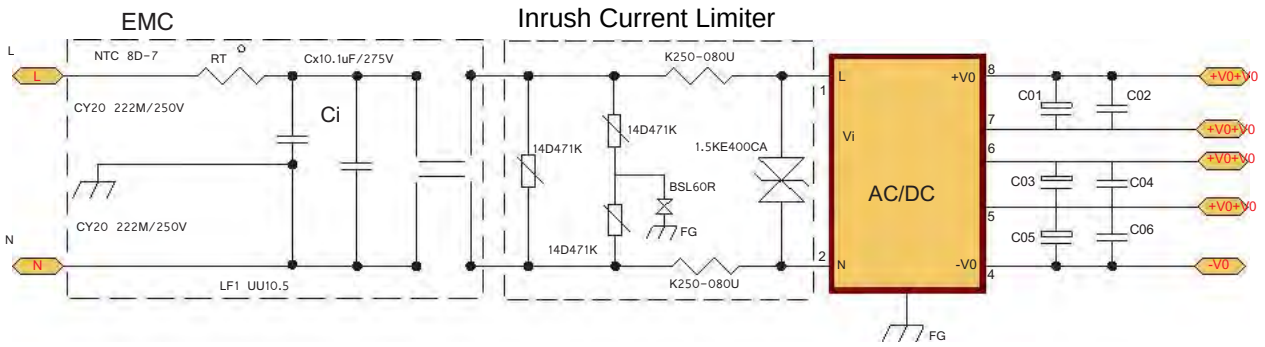


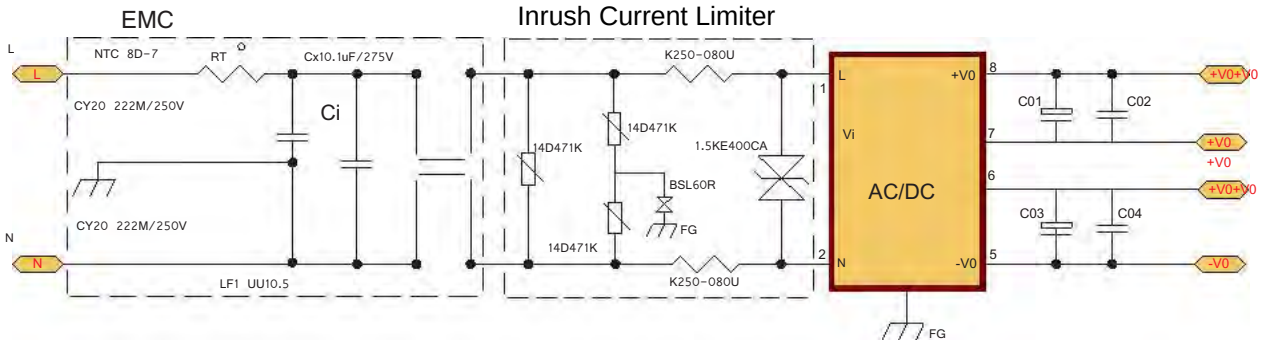
(1)



(2)

Typical application circuit





Input Device Recommendation

Vo(VDC)	Co1	Co2
2～5	104M 50V	2200uF/10V
5～15	104M 50V	1000uF/16V
15～24	104M 50V	470uF/25V
24～48	104M 50V	220uF/63V

Output Device Recommendation

Pout(W)	RT	Fuse(A)	Ci(uF)	Ri(KΩ)	LF(mH)
0.1~3	8D-7	0.2~0.4	0.1/275	560	8~10
3~10	8D-7	0.4~0.6	0.1/275	560	8~10
10~20	8D-7	0.6~0.8	0.1/275	560	8~10
20~30	8D-7	0.8~1.0	0.22/275	560	8~10
30~40	8D-7	1.0~1.2	0.22/275	560	8~10