



# AC/DC 电源模块

## JWAS 塑壳封装系列电源模块--20W 单路输出

JWAS Molded case packaging series power module--20W Single Output

### 典型性能 Typical Performance

- ◆ 外形尺寸: 70\*48\*24 (mm)  
Dimension: 70\*48\*24 (mm)
- ◆ 宽电压输入范围  
Wide range input voltage
- ◆ 交直流输入方式  
AC/DC input mode
- ◆ 高效率、高功率密度、低纹波  
High efficiency, High power density, Low ripple & noise
- ◆ 塑料绝缘外壳, 通孔安装  
Plastic insulation shell, Hole is installed



### 输入特性 Input Features

输入电压范围 Input voltage range	W:85~265VAC 120~370VDC N:165~265VAC 230~370VDC	110VAC 220VAC
输入电压频率 Input voltage frequency		47~63Hz
输入冲击电流 Inrush current	230VAC 冷启动 230VAC Cold start,	≦ 20A

### 输出特性 Output Features

输出电压精度 Voltage tolerance	标称电压 Nominal voltage	$V_{O1} \leq \pm 1\%$ (3.3V、5V $\leq \pm 2\%$ ) $V_{O2} \leq \pm 3.0\%$
电压调整率 Line regulation (full load)	输入电压从低端到高端变化 Change of input voltage from lowend to highend	$V_{O1} \leq \pm 0.5\%$ $V_{O2} \leq \pm 1.5\%$
负载调整率 Load regul	20%~100%负载变化 20%~100% Load change	$V_{O1} \leq \pm 0.5\%$ $V_{O2} \leq \pm 3.0\%$
纹波噪声 Ripple&Noise	20M 带宽 20M Bandwidth	≦ 1%
温度系数 Temperature coefficient		$\pm 0.02\%/^{\circ}\text{C}$
容性负载 Capacitive load	输入标称电压、满载 Input rated voltage, Full load	见附表 As per list enclosed
过流保护 Output overcircuit Protection		115~150%额定电流,自恢复 115~150%rated output circuit,auto recovery
短路保护 Short Circuit Protection		长期, 自恢复 Long-term,auto recovery
效率 Efficiency	输入标称电压、满载 Input rated voltage, Full load	80% (典型值) 75%(typical)
启动时间 Rise time	220VAC 满载 220VAC Full load	50mS (典型值) 50ms (typical)
保持时间 Hold up time	220VAC 满载 220VAC Full load	20mS (典型值) 50ms (typical)

### 一般特性 General Features

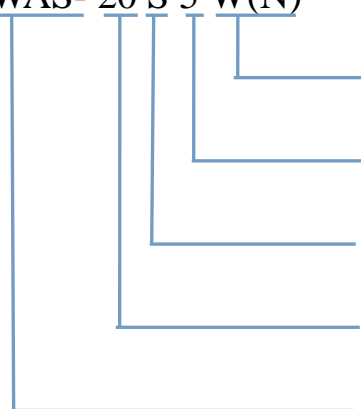
隔离耐压 Withstand voltage	输入对输出、输入对地 I/P-O/P、I/P-F/G 输出对地 O/P -F/G (1分钟, 漏电流 $\leq 5\text{mA}$ ) (1Mintute ,leakage current) $\leq 5\text{mA}$ )	2500VAC  500VAC
绝缘电阻 Isolation resistance	500V	$\geq 100\text{M}\Omega$
MTBF	环境 25°C Environment 25°C	$2.0 \times 10^5$ Hrs
工作温度 Operating temperature	55°C 以上降额使用 Above 55°C derating make	-25°C~70°C或-40°C~70°C -25°C~70°C or -40°C~70°C
储存温度 Storage temperature		-40°C~85°C
工作相对湿度 Operating humidity	无凝露及结冰现象 (non condensing)	10%~90%RH
储存相对湿度 Storage humidity	无凝露及结冰现象 (non condensing)	5%~95%RH
冷却方式 Cooling method		自然冷却 Convection

## 容性负载 Capacitive Load

Vout:5V		Vout:12V、15V		Vout:24V	
推荐值 Recommendations	最大值 Maximum	推荐值 Recommendations	最大值 Maximum	推荐值 Recommendations	最大值 Maximum
1000 $\mu$ F	4700 $\mu$ F	1000 $\mu$ F	3300 $\mu$ F	470 $\mu$ F	1000 $\mu$ F

## 命名方式 Naming Rules

### JWAS- 20 S 5 W(N)



输入电压范围 (W:85~265V, N:165~265V)  
 Input voltage range (W:85~265V, N:165~265V)  
 输出电压  
 Output voltage  
 单路输出  
 Single Output  
 输出功率  
 Output power  
 AC/DC 塑壳封装电源模块  
 AC/DC Molded case packaging power module

## 产品选型 Product selection

产品型号 Model No.	输出电压 Output voltage Vo	输出电流 Output current Io	输出电压精度 Output voltage tolerance	纹波噪声 R&N V (P-P)mV	效率 Efficiency
JWAS-20S3.3W(N)	3.3V	5.56A	$\pm 2\%$	100mV	73%
JWAS-20S5W(N)	5V	4.00A	$\pm 2\%$	100mV	76%
JWAS-2.5S9W(N)	9V	0.27A	$\pm 1\%$	100mV	78%
JWAS-20S12W(N)	12V	1.67A	$\pm 1\%$	120mV	80%
JWAS-20S15W(N)	15V	1.34A	$\pm 1\%$	120mV	81%
JWAS-20S24W(N)	24V	0.84A	$\pm 1\%$	150mV	83%

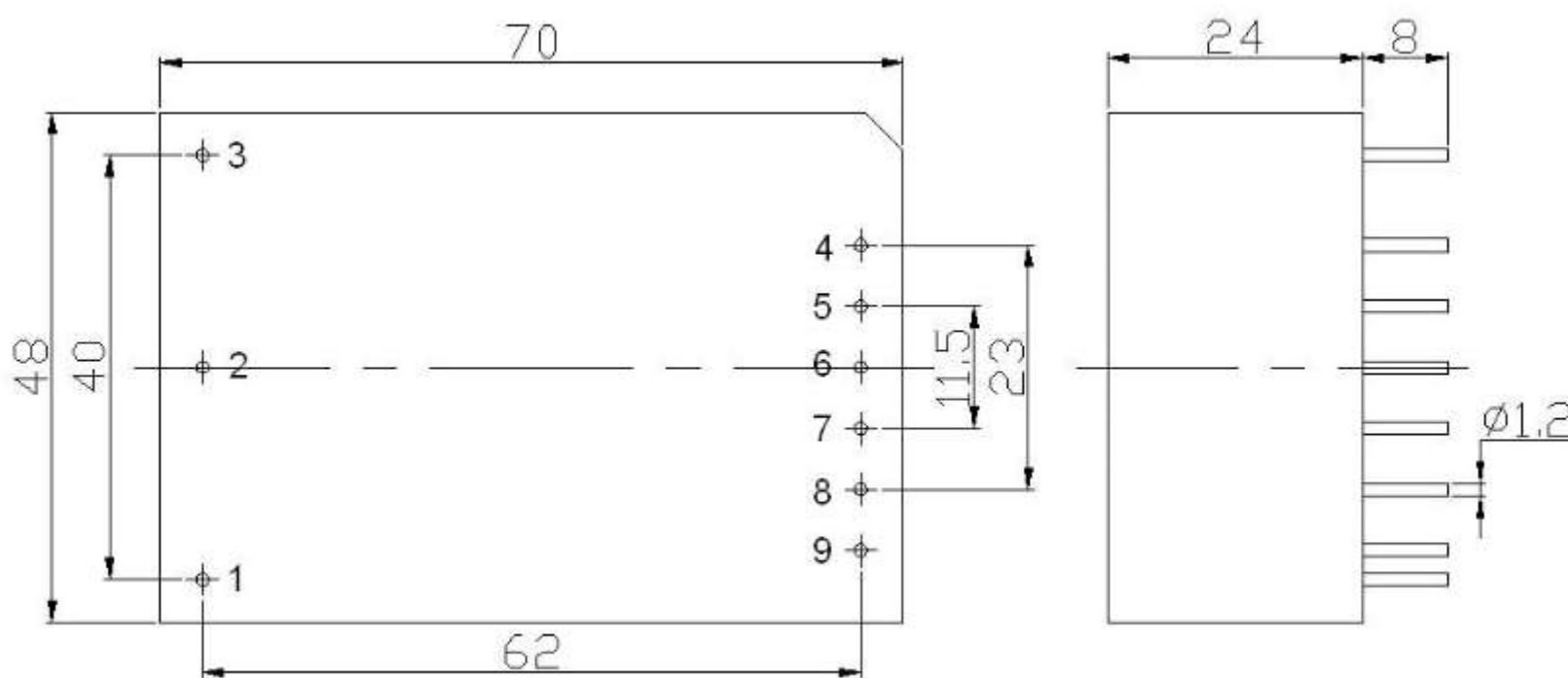
注：因篇幅有限，以上只是部分产品列表，若需列表以外产品，请与本公司销售部联系。

Note: Due to space limitations, the above list is only for some products, If other than a list of products, please contact the Company's sales department.

输出纹波噪声（峰-峰值）的测量，请参照模块测试说明中介绍的方法进行。

Output ripple noise measurement (peak - peak), please refer to the module test notes method is introduced.

## 封装尺寸图 Mechanical Data



## 管脚定义 Pin Assignments

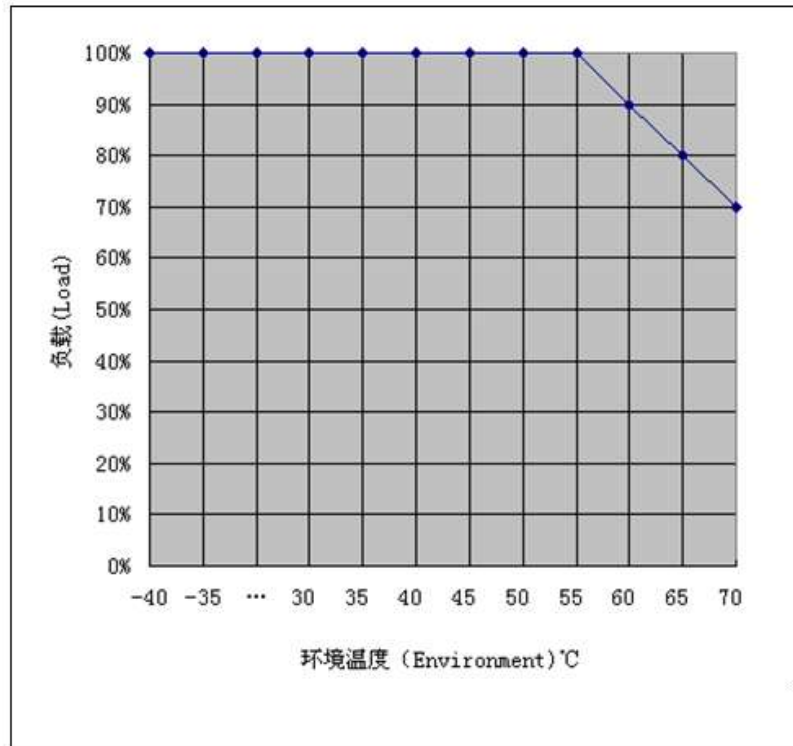
管脚说明	P1	P2	P3	P4	P5	P6	P7	P8	P9
单路 (S)	FG	AC(L)	AC(N)	Vo+	NP	GND	NP	GND	NP

注：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。

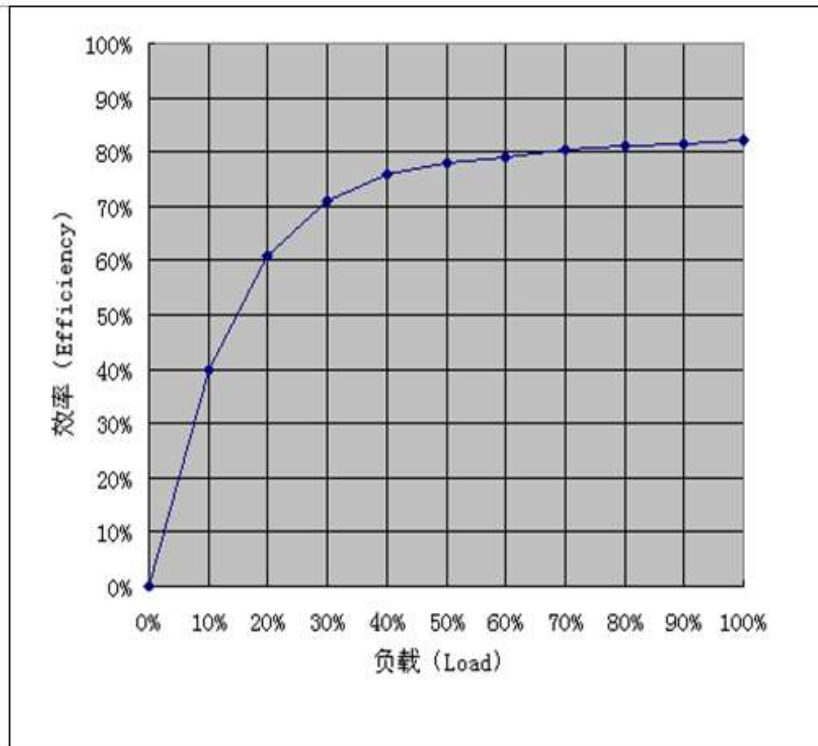
Note: The power modules such as the definition of the pin does not match with the hand book, please refer to the actual item.

## 典型曲线 Typical curve

降额曲线  
Derating curve



效率曲线  
Efficiency curve



## 纹波噪声测试: (靠测法 20MHz)

测试方法: 纹波&噪声用示波器来测试。测试模块噪声时为了避免引入额外噪声, 须用示波器探头直接接触模块输出引脚

