

JWDB--16 双路输出 B 型封装系列

JWDB--16W dual output B Package type series

典型性能 Typical Performance

- ◆外形尺寸: 25.4*50.8*10.16 (mm)
Dimension: 25.4*50.8*10.16 (mm)
- ◆宽输入电压范围 (2: 1 和 4: 1 输入电压范围)
Wide range input voltage (2: 1 & 4: 1 range input voltage)
- ◆105°C 长寿命电解电容
105°C long life electrolytic capacitors
- ◆高效率、高功率密度、低纹波
High efficiency, High power density, Low ripple & noise
- ◆黑金属外壳, 八面屏蔽, 通孔安装
Black metal shell, Eight face shield, Hole is installed
- ◆安规: EN60950
Ann rules: EN60950



输入特性 Input Features

输入电压范围 Input voltage range	标称 12V(W) Nominal voltage 12V(W) 标称 24V Nominal voltage 24V 标称 48V(W) Nominal voltage 48V(W) 标称 110V Nominal voltage 110V	9.5~18VDC(9.5~36V) 18~36VDC 36~72VDC(18~72V) 72~144VDC
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输出特性 Output Features

输出电压精度 Voltage tolerance	标称电压 Nominal voltage	$V_{O1} \cong \pm 1\%$ (3.3V、5V $\cong \pm 2\%$), $V_{O2} \cong \pm 3\%$
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	$\cong \pm 0.5\%$
负载调整率 Load regul	20%~100% 负载变化 20%~100% Load change	$V_{O1} \cong \pm 0.5\%$, $V_{O2} \cong \pm 3\%$
纹波噪声 Ripple&Noise	20M 带宽 20M Bandwidth	$\cong 1\%$
温度系数 Temperature coefficient		$\pm 0.02\%/^{\circ}\text{C}$
过功率保护 Output over power Protection		115~150% 额定功率, 自恢复 115~150% rated output power, auto recovery
短路保护 Short Circuit Protection		长期, 自恢复 Long-term, auto recovery
启动延迟时间 Turn-on delay time	典型值 Typical value	$\cong 300\text{mS}$
过冲幅度 Overshoot	25% 额定负载变化 25% rated load change	$\cong 500\mu\text{S}$
	$\Delta V_{O1} / V_{O1}$	$\cong \pm 5.0\%$

一般特性 General Features

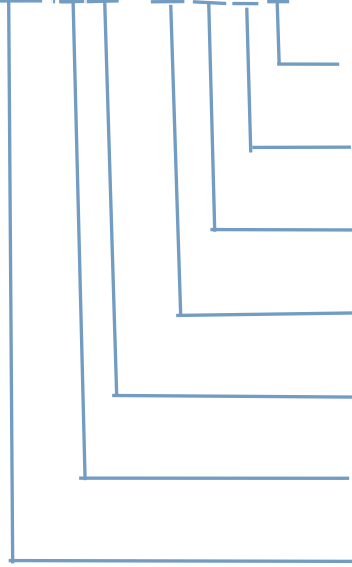
隔离耐压 Withstand voltage	输入对输出 I/P-O/P (1 分钟, 漏电流 $\cong 5\text{mA}$) (1Mintute ,leakage current) $\cong 5\text{mA}$)	1500VDC
绝缘电阻 Isolation resistance	500V	$\cong 100\text{M}\Omega$
MTBF	环境 25°C Environment 25°C	$2.0 \times 10^5 \text{Hrs}$
开关频率 switching frequency		300KHz
最大壳温 The highest shell temperature	工作环境温度较高时, 需加装辅助散热措施, 确保模块表面温度低于 95°C When working environment temperature is higher, need to add auxiliary colling measures, to ensure that the surface temperature below 95°C	+95°C
工作温度 Operating temperature	55°C 以上降额使用 Above 55°C derating make	-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

注: 模块的输出端可以外加电解电容, 但过大的容量和过低的 ESR 值可能会引起模块工作的不稳定, 或造成限流点变低, 推荐输出电容值为 100 $\mu\text{F/A}$, 此处的电流指额定输出电流。

Note: The output end of the module can be coupled with electrolytic capacitor, but too much capacity and low ESR value may cause the instability of the module, or current limit points of lower output capacitance of the recommended value of 100 $\mu\text{F/A}$, the current here refers to the rated output current.

命名方式 Naming Rules

JWD B16 -12 D 5 W



W: 输入电压 4:1; 无标注: 输入电压 2:1
 W: Input voltage range 4:1; Not marked input voltage range 2:1
 输出电压
 Output voltage
 双路共地输出
 Dual common-GND output
 标称输入电压
 Nominal Input voltage
 输出功率
 Output power
 外形尺寸 25.4*25.4(mm)
 Dimension 25.4*25.4(mm)
 DC/DC 电源模块
 DC/DC power module

产品选型 Product selection

产品型号 Model No.	输入电压 Input voltage V_{in}	输出电压 Output voltage V_o	输出电流 Output current I_o	输出电压精度 Output voltage tolerance	纹波噪声 R&N $V_{(P-P)mV}$	效率 Efficiency		
JWDB16-12D5(W)	9.5~18V	+ 5V	0.10~1.6.00A	±2%	50mV	80%		
		-5V	0.10~1.6.00A	±3%	100mV			
JWDB16-12D12(W)		9.5~36V(W)	+12V	0.06~0.0.67A	±1%	100mV	82%	
			-12V	0.06~0.67A	±3%	100mV		
JWDB16-12D15(W)				+ 15V	0.05~0.53A	±1%	100mV	83%
				-15V	0.05~0.53A	±3%	100mV	
JWDB16-12D24(W)	18~36V	+24V	0.03~0.0.33A	±1%	120mV	85%		
		-24V	0.03~0.33A	±3%	120mV			
JWDB16-24D5		36~72V	+ 5V	0.10~1.6.00A	±2%	50mV	80%	
			-5V	0.10~1.6.00A	±3%	100mV		
JWDB16-24D12			18~72V(W)	+12V	0.06~0.0.67A	±1%	100mV	83%
				-12V	0.06~0.67A	±3%	100mV	
JWDB16-24D15				+ 15V	0.05~0.53A	±1%	100mV	84%
				-15V	0.05~0.53A	±3%	100mV	
JWDB16-24D24	72~144V	+24V	0.03~0.0.33A	±1%	120mV	85%		
		-24V	0.03~0.33A	±3%	120mV			
JWDB16-48D5(W)		18~72V(W)	+ 5V	0.10~1.6.00A	±2%	50mV	81%	
			-5V	0.10~1.6.00A	±3%	100mV		
JWDB16-48D12(W)				+12V	0.06~0.0.67A	±1%	100mV	83%
				-12V	0.06~0.67A	±3%	100mV	
JWDB16-48D15(W)				+ 15V	0.05~0.53A	±1%	100mV	84%
				-15V	0.05~0.53A	±3%	100mV	
JWDB16-48D24(W)	72~144V	+24V	0.03~0.0.33A	±1%	120mV	85%		
		-24V	0.03~0.33A	±3%	120mV			
JWDB16-110D5		72~144V	+ 5V	0.10~1.6.00A	±2%	50mV	81%	
			-5V	0.10~1.6.00A	±3%	100mV		
JWDB16-110D12				+12V	0.06~0.0.67A	±1%	100mV	84%
				-12V	0.06~0.67A	±3%	100mV	
JWDB16-110D15				+ 15V	0.05~0.53A	±1%	100mV	85%
				-15V	0.05~0.53A	±3%	100mV	
JWDB16-110D24		+24V	0.03~0.0.33A	±1%	120mV	86%		
		-24V	0.03~0.33A	±3%	120mV			

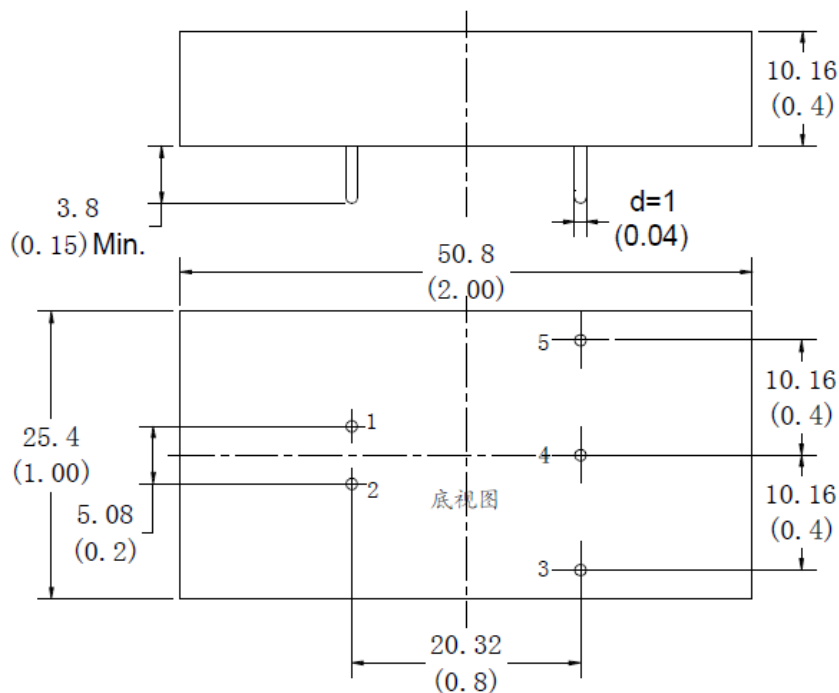
注: 因篇幅有限, 以上只是部分产品列表, 若需列表以外产品, 请与本公司销售部联系。

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。

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.

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

封装尺寸图 Mechanical Data



单位: mm (inch)

管脚定义 Pin Assignments

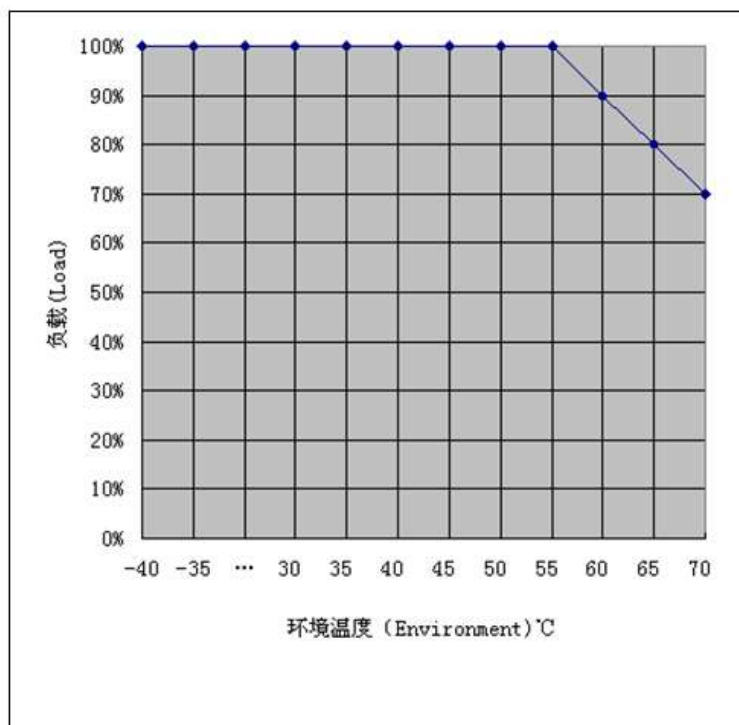
P1	P2	P3	P4	P5
Vin+	Vin-	V _{O2} -	COM	V _{O1} +

注：电源模块的外形尺寸和管脚定义如与选型手册不符，请以实物实际尺寸为准。

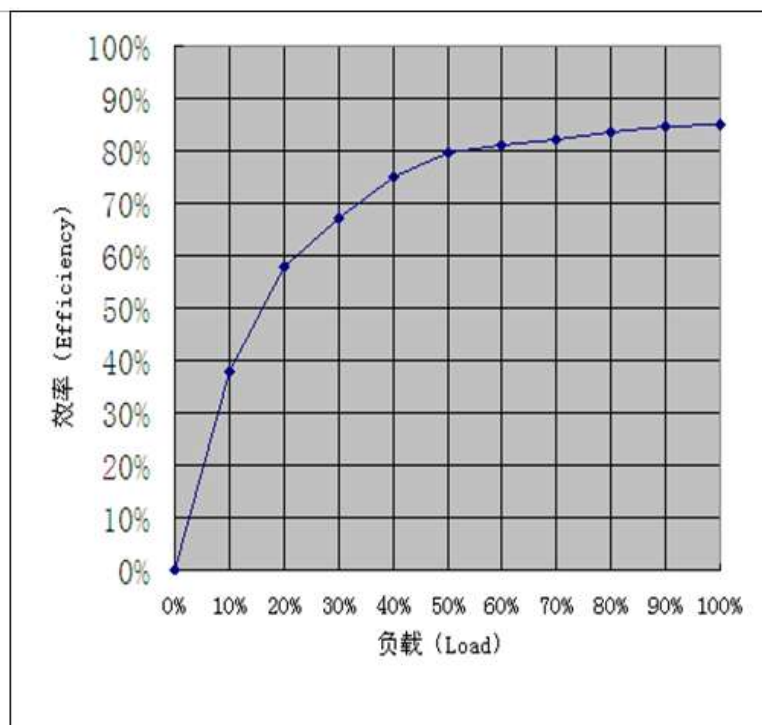
Note: Dimensions and pin definitions of power module such as inconsistent with the hand book, please in kind prevail actual size

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

