DC/DC 电源模块

JWDH –20W 三路输出 H 系列

JWDH--20W triple output H series

典型性能 Typical Performance

◆外形尺寸：72*50*28（㎜）
Dimension：72*50*28（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℃长寿命电解电容
105℃ 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 Nominal voltage12V	9.5~18VDC
	标称 24V Nominal voltage24V	18~36VDC
	标称 48V Nominal voltage48V	36~72VDC
	标称 110V Nominal voltage110V	72~144VDC

输出特性 Output Features

输出电压精度 Voltage tolerance	标称电压 Nominal voltage	V_{o1}≦±1%（3.3V、5V≦±2%), V_{o2}≦±3%, V_{03}≦±5%
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_{01}≦±0.5% ,V_{02}、V_{03}≦±1.5%
负载调整率 Load regul	20%~100%负载变化 20%~100% Load change	V_{01}≦±0.5%，V_{02}≦±3%，V_{03}≦±5%
纹波噪声 Ripple&Noise	20M 带宽 20M Bandwidth	≦1%
温度系数 Temperature coefficient		±0.02%/℃
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	≦300mS
过冲幅度 Overshoot	25%额定负载变化 25% rated load change	≦500μ S
	Δ $V_{01/}$ / V_{01}	≦±5.0%

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 输出对输出（隔离） O/P-O/P （1 分钟，漏电流≦5mA ） (1Mintute ,leakage current)≦5mA)	3000VDC 500VDC 500VDC
绝缘电阻 Isolation resistance	500V	≧100MΩ
MTBF	环境 25℃ Environment 25℃	$2.0*10^5$Hrs
开关频率 switching frequency		100KHz
工作温度 Operating temperature	55℃以上降额使用 Above 55℃ derating make	-40℃~70℃
储存温度 Storage temperature		-40℃~85℃
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 100μ 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 u F/A, the current here refers to the rated output current.

命名方式　Naming Rules

JWDH25 -12 S5 D12 I

- 隔离输出 Isolatet output
- V_{o2}、V_{o3} 共地输出 V_{o2}、V_{o3} common-GND output
- 输出电压 V_{o1} Output voltage V_{o1}
- 标称输入电压 Nominal Input voltage
- 输出功率 Output power
- DC/DC H 系列电源模块 DC/DC power module H series

JWDH25 -12 S5 S12 S-5I

- 隔离输出 isolate output
- 输出电压 V_{o3} Output voltage V_{o3}
- 输出电压 V_{o2} Output voltage V_{o2}
- 输出电压 V_{o1} Output voltage V_{o1}
- 标称输入电压 Nominal Input voltage
- 输出功率 Output power
- DC/DC H 系列电源模块 DC/DC power module H series

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
JWDH25-12S5D5I	9.5~18V	+ 5V	0.30~3.00A	±2%	100mV	77%
		+5V	0.10~1.00A	±5%	100mV	
		-5V	0.10~1.00A	±5%	100mV	
JWDH25-12S5D12I		+5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.04~0.42A	±3%	120mV	
		-12V	0.04~0.42A	±3%	120mV	
JWDH25-12S5D15I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+ 15V	0.03~0.33A	±3%	120mV	
		-15V	0.03~0.33A	±3%	120mV	
JWDH25-12S5D24I		+ 5V	0.30~3.00A	±2%	100mV	82%
		+24V	0.02~0.21A	±3%	150mV	
		-24V	0.02~0.21A	±3%	150mV	
JWDH25-12S12D5I		+12V	0.20~1.50A	±1%	120mV	80%
		+5V	0.06~0.60A	±5%	100mV	
		-5V	0.06~0.60A	±5%	80mV	
JWDH25-12S24D5I		+24V	0.08~0.83A	±1%	150mV	81%
		+5V	0.05~0.50A	±5%	80mV	
		-5V	0.05~0.50A	±5%	80mV	
JWDH25-12S24D12I		+24V	0.08~0.83A	±1%	150mV	84%
		+12V	0.02~0.20A	±3%	120mV	
		-12V	0.02~0.20A	±3%	120mV	
JWDH25-12S5S12S-5I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.05~0.50A	±3%	120mV	
		-5V	0.08~0.80A	±5%	80mV	
JWDH25-24S5D5I	18~36V	+ 5V	0.30~3.00A	±2%	100mV	77%
		+5V	0.10~1.00A	±5%	100mV	
		-5V	0.10~1.00A	±5%	100mV	
JWDH25-24S5D12I		+5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.04~0.42A	±3%	120mV	
		-12V	0.04~0.42A	±3%	120mV	
JWDH25-24S5D15I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+ 15V	0.03~0.33A	±3%	120mV	
		-15V	0.03~0.33A	±3%	120mV	
JWDH25-24S5D24I		+ 5V	0.30~3.00A	±2%	100mV	82%
		+24V	0.02~0.21A	±3%	150mV	
		-24V	0.02~0.21A	±3%	150mV	
JWDH25-24S12D5I		+12V	0.20~1.50A	±1%	120mV	80%
		+5V	0.06~0.60A	±5%	100mV	
		-5V	0.06~0.60A	±5%	80mV	

JWDH25-24S24D5I	18~36V	+24V	0.08~0.83A	±1%	150mV	81%
		+5V	0.05~0.50A	±5%	80mV	
		-5V	0.05~0.50A	±5%	80mV	
JWDH25-24S24D12I		+24V	0.08~0.83A	±1%	150mV	84%
		+12V	0.02~0.20A	±3%	120mV	
		-12V	0.02~0.20A	±3%	120mV	
JWDH25-24S5S12S-5I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.05~0.50A	±3%	120mV	
		-5V	0.08~0.80A	±5%	80mV	
JWDH25-48S5D5I	36~72V	+ 5V	0.30~3.00A	±2%	100mV	77%
		+5V	0.10~1.00A	±5%	100mV	
		-5V	0.10~1.00A	±5%	100mV	
JWDH25-48S5D12I		+5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.04~0.42A	±3%	120mV	
		-12V	0.04~0.42A	±3%	120mV	
JWDH25-48S5D15I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+ 15V	0.03~0.33A	±3%	120mV	
		-15V	0.03~0.33A	±3%	120mV	
JWDH25-48S5D24I		+ 5V	0.30~3.00A	±2%	100mV	82%
		+24V	0.02~0.21A	±3%	150mV	
		-24V	0.02~0.21A	±3%	150mV	
JWDH25-48S12D5I		+12V	0.20~1.50A	±1%	120mV	80%
		+5V	0.06~0.60A	±5%	100mV	
		-5V	0.06~0.60A	±5%	80mV	
JWDH25-48S24D5I		+24V	0.08~0.83A	±1%	150mV	81%
		+5V	0.05~0.50A	±5%	80mV	
		-5V	0.05~0.50A	±5%	80mV	
JWDH25-48S24D12I		+24V	0.08~0.83A	±1%	150mV	84%
		+12V	0.02~0.20A	±3%	120mV	
		-12V	0.02~0.20A	±3%	120mV	
JWDH25-48S5S12S-5I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.05~0.50A	±3%	120mV	
		-5V	0.08~0.80A	±5%	80mV	
JWDH25-110S5D5I	72~144V	+ 5V	0.30~3.00A	±2%	100mV	77%
		+5V	0.10~1.00A	±5%	100mV	
		-5V	0.10~1.00A	±5%	100mV	
JWDH25-110S5D12I		+5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.04~0.42A	±3%	120mV	
		-12V	0.04~0.42A	±3%	120mV	
JWDH25-110S5D15I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+ 15V	0.03~0.33A	±3%	120mV	
		-15V	0.03~0.33A	±3%	120mV	
JWDH25-110S5D24I		+ 5V	0.30~3.00A	±2%	100mV	82%
		+24V	0.02~0.21A	±3%	150mV	
		-24V	0.02~0.21A	±3%	150mV	
JWDH25-110S12D5I		+12V	0.20~1.50A	±1%	120mV	80%
		+5V	0.06~0.60A	±5%	100mV	
		-5V	0.06~0.60A	±5%	80mV	
JWDH25-110S24D5I		+24V	0.08~0.83A	±1%	150mV	81%
		+5V	0.05~0.50A	±5%	80mV	
		-5V	0.05~0.50A	±5%	80mV	
JWDH25-110S24D12I		+24V	0.08~0.83A	±1%	150mV	84%
		+12V	0.02~0.20A	±3%	120mV	
		-12V	0.02~0.20A	±3%	120mV	
JWDH25-110S5S12S-5I		+ 5V	0.30~3.00A	±2%	100mV	79%
		+12V	0.05~0.50A	±3%	120mV	
		-5V	0.08~0.80A	±5%	80mV	

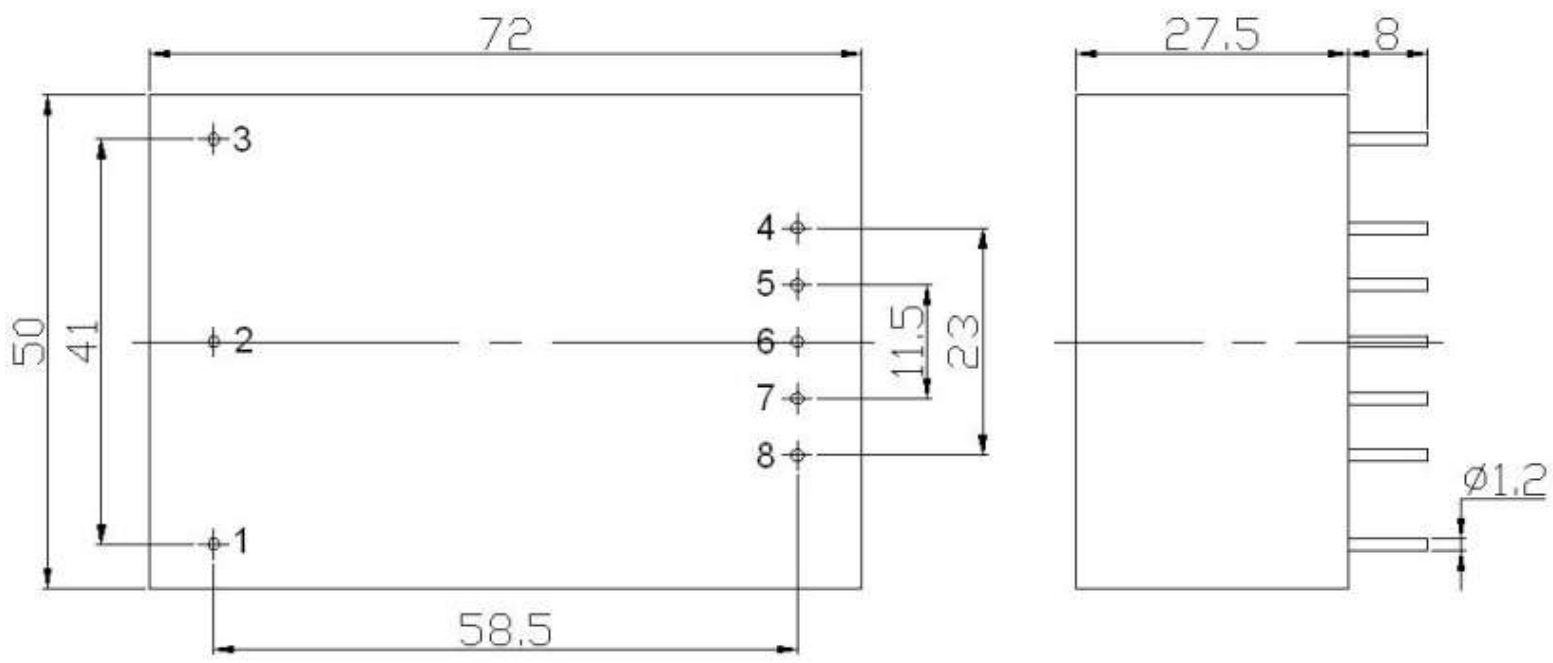
注：因篇幅有限，以上只是部分产品列表，若需列表以外产品，请与本公司销售部联系。

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 MechanicalData



管脚定义 Pin Assignments

P1	P2	P3	P4	P5	P6	P7	P8
FG	V_{in+}	V_{in-}	V_{O2+}	COM	V_{O3-}	V_{O1+}	GND1

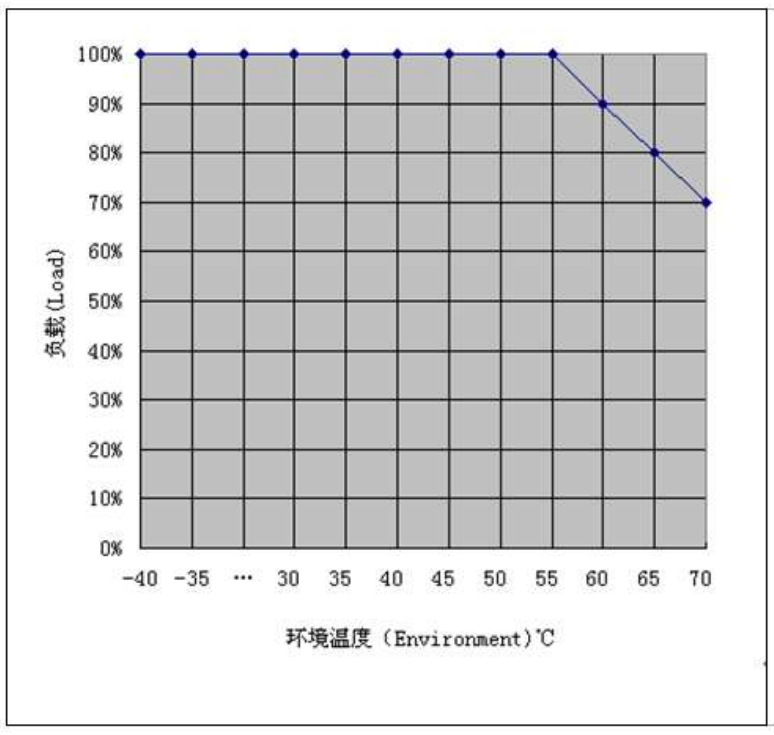
注：电源模块的外形尺寸和管脚定义如与选型手册不符，请以实物实际尺寸为准。

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

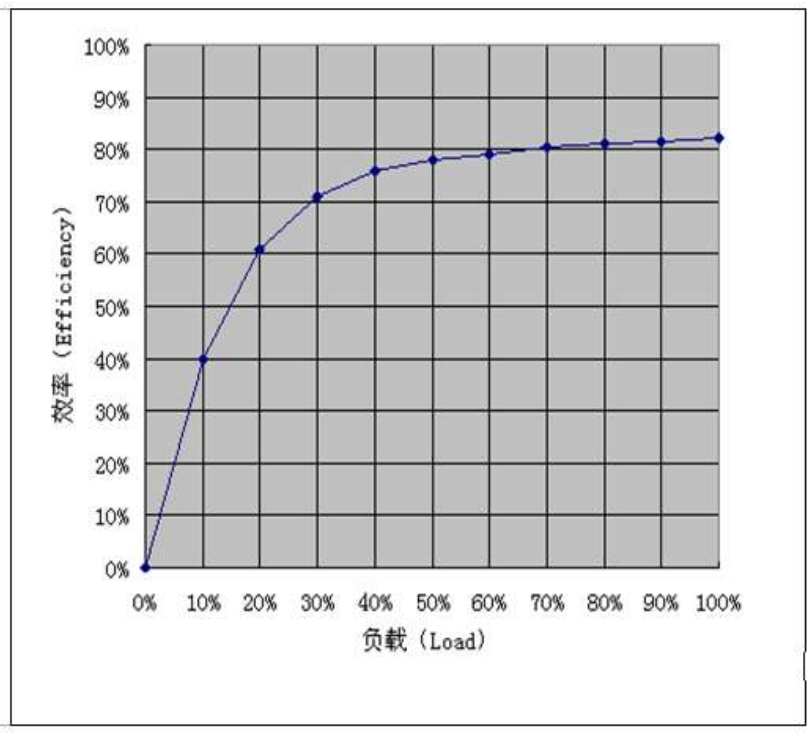
降额曲线

Deratingcurve



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