



DC/DC 电源模块

JWDH -10W 三路输出 H 系列

JWDH--10W triple output H series

典型性能 Typical Performance

- ◆外形尺寸：62*46*24 (mm)
Dimension: 62*46*24 (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 voltage12V(W) | 9.5~18VDC(9.5~36V) |
| | 标称 24V Nominal voltage24V | 18~36VDC |
| | 标称 48V(W) Nominal voltage48V(W) | 36~72VDC(18~72V) |
| | 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 | $V_{o1} \leq \pm 1\%$ (3.3V、5V $\leq \pm 2\%$), $V_{o2} \leq \pm 3\%$, $V_{o3} \leq \pm 5\%$ |
| 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 | $V_{o1} \leq \pm 0.5\%$, V_{o2} 、 $V_{o3} \leq \pm 1.5\%$ |
| 负载调整率 Load regul | 20%~100%负载变化 20%~100% Load change | $V_{o1} \leq \pm 0.5\%$, $V_{o2} \leq \pm 3\%$, $V_{o3} \leq \pm 5\%$ |
| 纹波噪声 Ripple&Noise | 20M 带宽 20M Bandwidth | $\leq 1\%$ |
| 温度系数 Temperature coefficient | | $\pm 0.02\%/^{\circ}\text{C}$ |
| 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 |
| 启动延迟时间 Turn-on delay time | 典型值 Typical value | $\leq 300\text{ms}$ |
| 过冲幅度 Overshoot | 25%额定负载变化 25% rated load change | $\leq 500\mu\text{S}$ |
| | $\Delta V_{o1} / V_{o1}$ | $\leq \pm 5.0\%$ |

一般特性 General Features

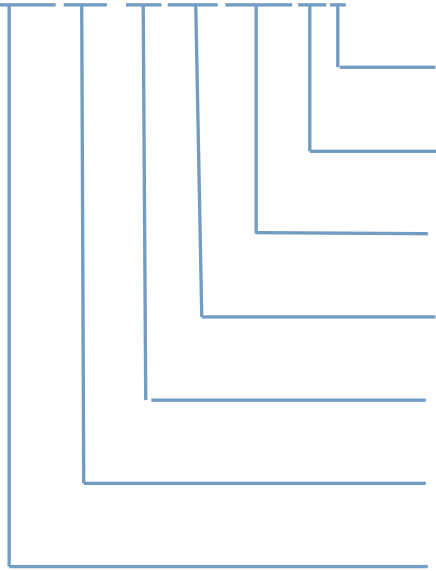
| | | |
|-------------------------------|--|------------------------------|
| 隔离耐压 Withstand voltage | 输入对输出、输入对地 I/P-O/P、I/P-F/G | 3000VDC |
| | 输出对地 O/P-F/G | 500VDC |
| | 输出对输出 (隔离) O/P-O/P | 500VDC |
| | (1分钟, 漏电流 $\leq 5\text{mA}$) (1Mintute ,leakage current) $\leq 5\text{mA}$) | |
| 绝缘电阻 Isolation resistance | 500V | $\geq 100\text{M}\Omega$ |
| MTBF | 环境 25°C Environment 25°C | $2.0 \times 10^5 \text{Hrs}$ |
| 开关频率 switching frequency | | 100KHz |
| 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 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.

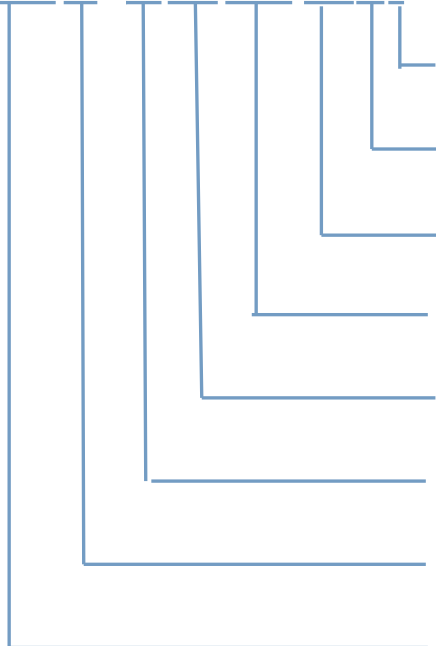
命名方式 Naming Rules

JWDH10 -12 S5 D12WI



隔离输出
Isolate output
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
V₀₂、V₀₃ 共地输出
V₀₂、V₀₃ common-GND output
输出电压 V₀₁
Output voltage V₀₁
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

JWDH10 -12 S5 S12 S-5WI



隔离输出
Isolate output
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 V₀₃
Output voltage V₀₃
输出电压 V₀₂
Output voltage V₀₂
输出电压 V₀₁
Output voltage V₀₁
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 | | | |
|-----------------------|--|--|--|---------------------------------------|-------------------------------------|------------------|-------|-------|-----|
| JWDH10-12S5D5(W)I | 9.5~18V 9.5~36V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 77% | | | |
| | | +5V | 0.05~0.50A | ±5% | 80mV | | | | |
| | | -5V | 0.05~0.50A | ±5% | 80mV | | | | |
| JWDH10-12S5D12(W)I | | 9.5~18V 9.5~36V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 78% | | |
| | | | +12V | 0.02~0.20A | ±3% | 100mV | | | |
| | | | -12V | 0.02~0.20A | ±3% | 100mV | | | |
| JWDH10-12S5D15(W)I | | | 9.5~18V 9.5~36V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 79% | |
| | | | | +15V | 0.02~0.20A | ±3% | 120mV | | |
| | | | | -15V | 0.02~0.20A | ±3% | 120mV | | |
| JWDH10-12S5D24(W)I | | | | 9.5~18V 9.5~36V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 81% |
| | | | | | +24V | 0.01~0.10A | ±3% | 120mV | |
| | | | | | -24V | 0.01~0.10A | ±3% | 120mV | |
| JWDH10-12S12D5(W)I | 9.5~18V 9.5~36V(W) | | | | +12V | 0.06~0.60A | ±1% | 120mV | 78% |
| | | | | | +5V | 0.01~0.30A | ±5% | 80mV | |
| | | | | | -5V | 0.01~0.30A | ±5% | 80mV | |
| JWDH10-12S24D5(W)I | | 9.5~18V 9.5~36V(W) | | | +24V | 0.03~0.30A | ±1% | 120mV | 80% |
| | | | | | +5V | 0.03~0.30A | ±5% | 80mV | |
| | | | | | -5V | 0.03~0.30A | ±5% | 80mV | |
| JWDH10-12S24D12(W)I | | | 9.5~18V 9.5~36V(W) | | +24V | 0.03~0.30A | ±1% | 120mV | 82% |
| | | | | | +12V | 0.01~0.15A | ±3% | 100mV | |
| | | | | | -12V | 0.01~0.15A | ±3% | 100mV | |
| JWDH10-12S5S12S-5(W)I | | | | 9.5~18V 9.5~36V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 79% |
| | | | | | +12V | 0.03~0.30A | ±3% | 120mV | |
| | | | | | -5V | 0.03~0.30A | ±5% | 80mV | |
| JWDH10-24S5D5I | 18~36V | | | | +5V | 0.10~1.00A | ±2% | 80mV | 77% |
| | | | | | +5V | 0.05~0.50A | ±5% | 80mV | |
| | | | | | -5V | 0.05~0.50A | ±5% | 80mV | |
| JWDH10-24S5D12I | | 18~36V | | | +5V | 0.10~1.00A | ±2% | 80mV | 78% |
| | | | | | +12V | 0.02~0.20A | ±3% | 100mV | |
| | | | | | -12V | 0.02~0.20A | ±3% | 100mV | |
| JWDH10-24S5D15I | | | 18~36V | | +5V | 0.10~1.00A | ±2% | 80mV | 79% |
| | | | | | +15V | 0.02~0.20A | ±3% | 120mV | |
| | | | | | -15V | 0.02~0.20A | ±3% | 120mV | |
| JWDH10-24S5D24I | | | | 18~36V | +5V | 0.10~1.00A | ±2% | 80mV | 81% |
| | | | | | +24V | 0.01~0.10A | ±3% | 120mV | |
| | | | | | -24V | 0.01~0.10A | ±3% | 120mV | |
| JWDH10-24S12D5I | 18~36V | | | | +12V | 0.06~0.60A | ±1% | 120mV | 78% |
| | | | | | +5V | 0.01~0.30A | ±5% | 80mV | |
| | | | | | -5V | 0.01~0.30A | ±5% | 80mV | |

| | | | | | | | | | | | | | | |
|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|------------|------------|-------|-------|-----|
| JWDH10-24S24D5I | 18~36V | +24V | 0.03~0.30A | ±1% | 120mV | 80% | | | | | | | | |
| | | +5V | 0.03~0.30A | ±5% | 80mV | | | | | | | | | |
| | | -5V | 0.03~0.30A | ±5% | 80mV | | | | | | | | | |
| JWDH10-24S24D12I | | 18~36V | +24V | 0.03~0.30A | ±1% | 120mV | 82% | | | | | | | |
| | | | +12V | 0.01~0.15A | ±3% | 100mV | | | | | | | | |
| | | | -12V | 0.01~0.15A | ±3% | 100mV | | | | | | | | |
| JWDH10-24S5S12S-5I | | | 18~36V | +5V | 0.10~1.00A | ±2% | 80mV | 79% | | | | | | |
| | | | | +12V | 0.03~0.30A | ±3% | 120mV | | | | | | | |
| | | | | -5V | 0.03~0.30A | ±5% | 80mV | | | | | | | |
| JWDH10-48S5D5(W)I | 36~72V 18~72V(W) | | | +5V | 0.10~1.00A | ±2% | 80mV | 77% | | | | | | |
| | | | | +5V | 0.05~0.50A | ±5% | 80mV | | | | | | | |
| | | | | -5V | 0.05~0.50A | ±5% | 80mV | | | | | | | |
| JWDH10-48S5D12(W)I | | 36~72V 18~72V(W) | | +5V | 0.10~1.00A | ±2% | 80mV | 78% | | | | | | |
| | | | | +12V | 0.02~0.20A | ±3% | 100mV | | | | | | | |
| | | | | -12V | 0.02~0.20A | ±3% | 100mV | | | | | | | |
| JWDH10-48S5D15(W)I | | | 36~72V 18~72V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 79% | | | | | | |
| | | | | +15V | 0.02~0.20A | ±3% | 120mV | | | | | | | |
| | | | | -15V | 0.02~0.20A | ±3% | 120mV | | | | | | | |
| JWDH10-48S5D24(W)I | | | | 36~72V 18~72V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 81% | | | | | |
| | | | | | +24V | 0.01~0.10A | ±3% | 120mV | | | | | | |
| | | | | | -24V | 0.01~0.10A | ±3% | 120mV | | | | | | |
| JWDH10-48S12D5(W)I | | | | | 36~72V 18~72V(W) | +12V | 0.06~0.60A | ±1% | 120mV | 78% | | | | |
| | | | | | | +5V | 0.01~0.30A | ±5% | 80mV | | | | | |
| | | | | | | -5V | 0.01~0.30A | ±5% | 80mV | | | | | |
| JWDH10-48S24D5(W)I | | | | | | 36~72V 18~72V(W) | +24V | 0.03~0.30A | ±1% | 120mV | 80% | | | |
| | | | | | | | +5V | 0.03~0.30A | ±5% | 80mV | | | | |
| | | | | | | | -5V | 0.03~0.30A | ±5% | 80mV | | | | |
| JWDH10-48S24D12(W)I | | | | | | | 36~72V 18~72V(W) | +24V | 0.03~0.30A | ±1% | 120mV | 82% | | |
| | | | | | | | | +12V | 0.01~0.15A | ±3% | 100mV | | | |
| | | | | | | | | -12V | 0.01~0.15A | ±3% | 100mV | | | |
| JWDH10-48S5S12S-5(W)I | | | | | | | | 36~72V 18~72V(W) | +5V | 0.10~1.00A | ±2% | 80mV | 79% | |
| | | | | | | | | | +12V | 0.03~0.30A | ±3% | 120mV | | |
| | | | | | | | | | -5V | 0.03~0.30A | ±5% | 80mV | | |
| JWDH10-110S5D5I | | | | | | | | | 72~144V | +5V | 0.10~1.00A | ±2% | 80mV | 77% |
| | | | | | | | | | | +5V | 0.05~0.50A | ±5% | 80mV | |
| | | | | | | | | | | -5V | 0.05~0.50A | ±5% | 80mV | |
| JWDH10-110S5D12I | 72~144V | | | | | | | | | +5V | 0.10~1.00A | ±2% | 80mV | 78% |
| | | | | | | | | | | +12V | 0.02~0.20A | ±3% | 100mV | |
| | | | | | | | | | | -12V | 0.02~0.20A | ±3% | 100mV | |
| JWDH10-110S5D15I | | 72~144V | | | | | | | | +5V | 0.10~1.00A | ±2% | 80mV | 79% |
| | | | | | | | | | | +15V | 0.02~0.20A | ±3% | 120mV | |
| | | | | | | | | | | -15V | 0.02~0.20A | ±3% | 120mV | |
| JWDH10-110S5D24I | | | 72~144V | | | | | | | +5V | 0.10~1.00A | ±2% | 80mV | 81% |
| | | | | | | | | | | +24V | 0.01~0.10A | ±3% | 120mV | |
| | | | | | | | | | | -24V | 0.01~0.10A | ±3% | 120mV | |
| JWDH10-110S12D5I | | | | 72~144V | | | | | | +12V | 0.06~0.60A | ±1% | 120mV | 78% |
| | | | | | | | | | | +5V | 0.01~0.30A | ±5% | 80mV | |
| | | | | | | | | | | -5V | 0.01~0.30A | ±5% | 80mV | |
| JWDH10-110S24D5I | | | | | 72~144V | | | | | +24V | 0.03~0.30A | ±1% | 120mV | 80% |
| | | | | | | | | | | +5V | 0.03~0.30A | ±5% | 80mV | |
| | | | | | | | | | | -5V | 0.03~0.30A | ±5% | 80mV | |
| JWDH10-110S24D12I | | | | | | 72~144V | | | | +24V | 0.03~0.30A | ±1% | 120mV | 82% |
| | | | | | | | | | | +12V | 0.01~0.15A | ±3% | 100mV | |
| | | | | | | | | | | -12V | 0.01~0.15A | ±3% | 100mV | |
| JWDH10-110S5S12S-5I | | | | | | | 72~144V | | | +5V | 0.10~1.00A | ±2% | 80mV | 79% |
| | | | | | | | | | | +12V | 0.03~0.30A | ±3% | 120mV | |
| | | | | | | | | | | -5V | 0.03~0.30A | ±5% | 80mV | |

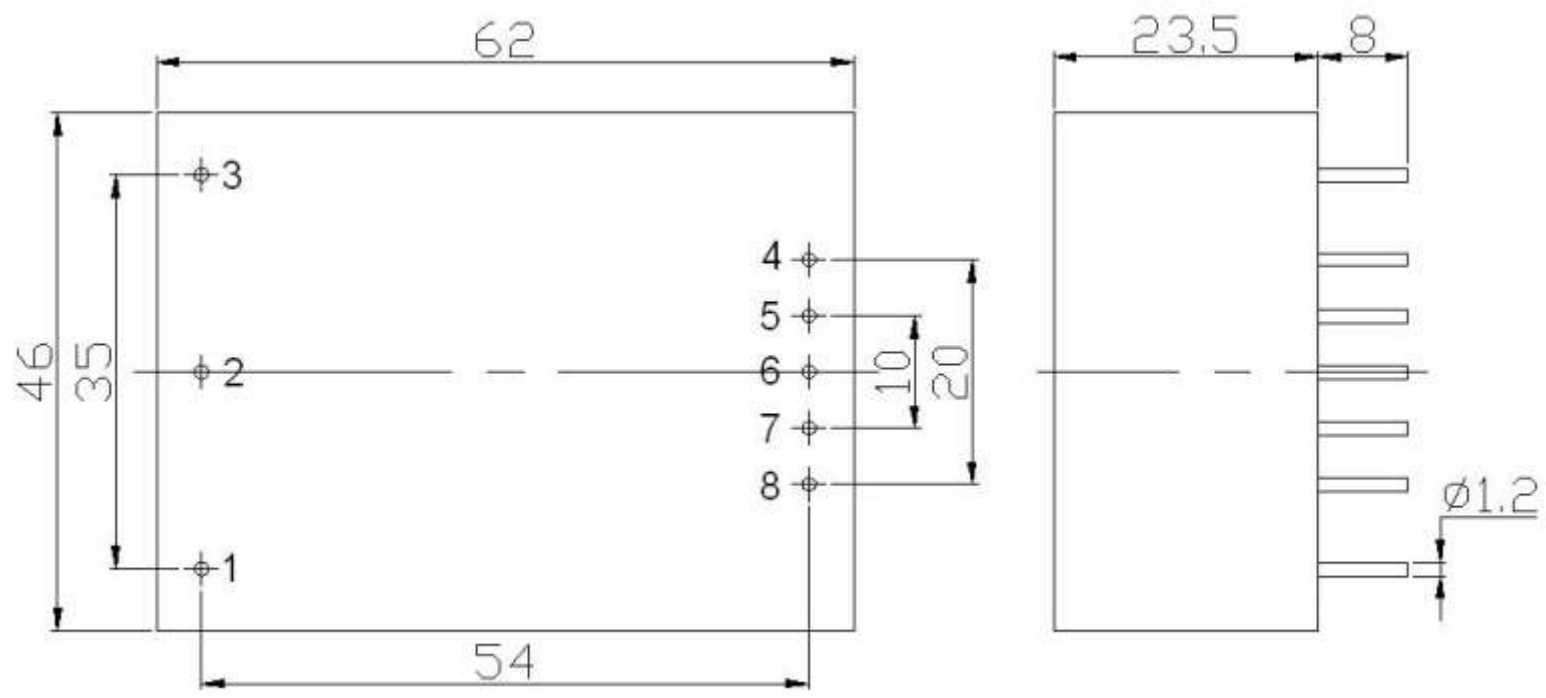
注：因篇幅有限，以上只是部分产品列表，若需列表以外产品，请与本公司销售部联系。

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

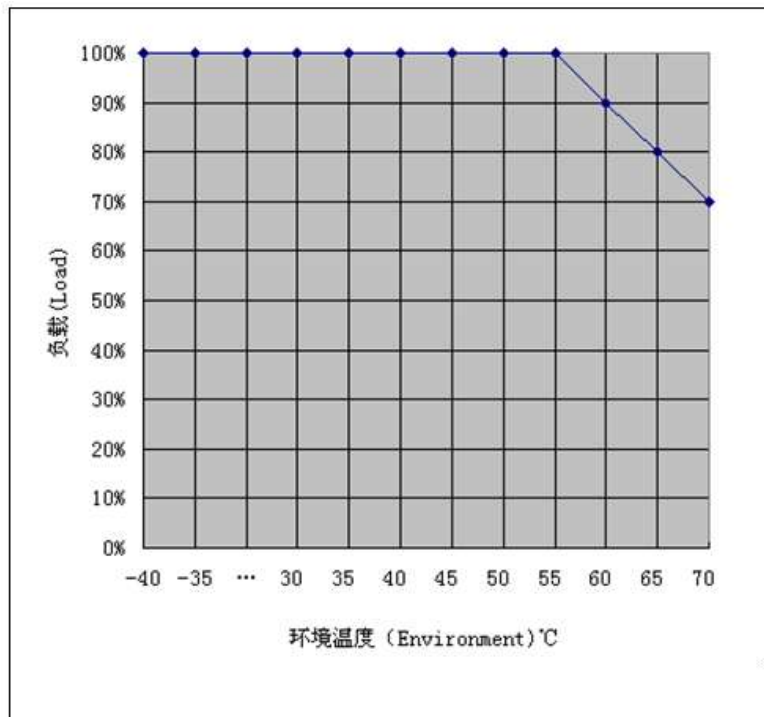
| P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 |
|----|------------------|------------------|------------------|-----|------------------|------------------|------|
| FG | V _{in+} | V _{in-} | V _{O2+} | COM | V _{O3-} | V _{O1+} | GND1 |

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。

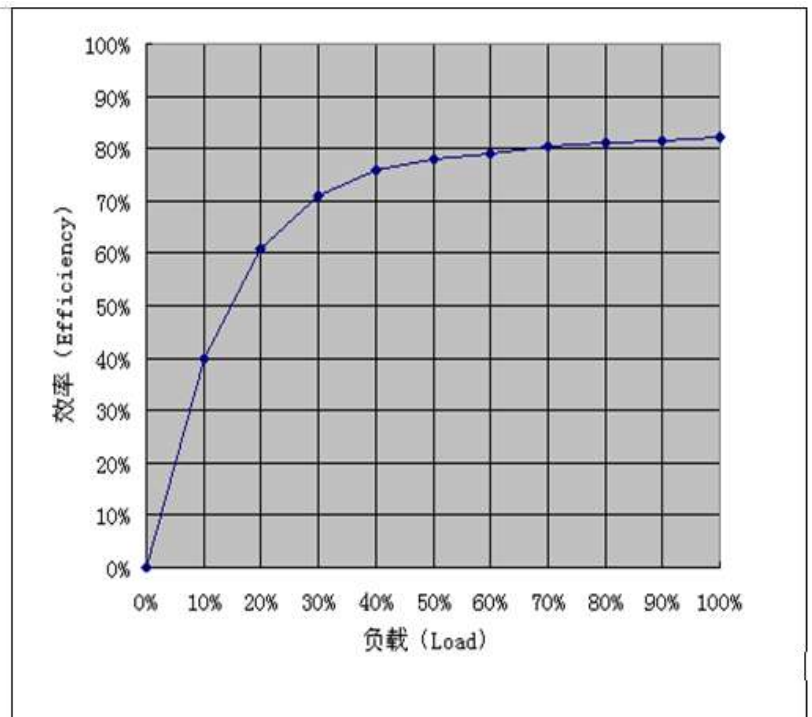
Note: Dimensions and pin definitions of power module such as inconsistent with the hand book, please in kind prevail actual size

典型曲线 Typical curve

降额曲线
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

