

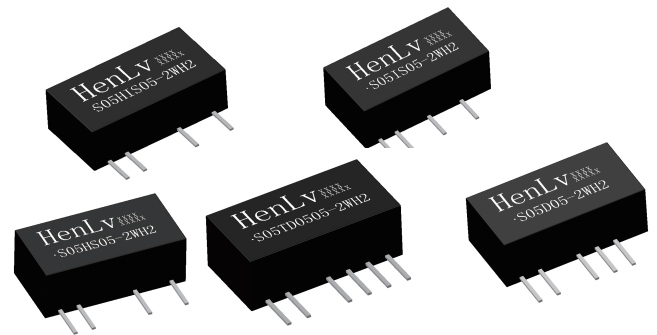


定电压2W系列

定电压输入

隔离(非)稳压单、双路输出

DC/DC 模块电源



产品特点

- 定电压输入(5-24VDC±5%)
- 效率高达76%
- 宽工作温度范围：-40℃~+85℃
- 隔离电压1500VDC(带“H”为3000VDC) 0.5mA 1Minute
- 输出电压精度±4%(带“T”输出精度为±2%)
- 塑胶外壳阻燃封装
- 符合RoHS指令
- 散热方式：自然冷却
- 平均故无故障时间(MTBF):500000H
- 单排直插(SIP)封装

应用领域

通讯接口转换器 (RS232/485)蜂窝电话, 半导体激光器, 运算放大器电源, 便携仪表, 自控装置等。

定电压2W模块电源参数

| 型号 | 输入电压 (V) | 输出电压 (Vo±2%) (Vo±4%) | 满载输出电流 (mA) | 效率 | 隔离耐压 VDC | 重量 (g) ±05 | 封装 | 认证 |
|-----------------|-----------|----------------------|-------------|------|--------------------|------------|-----|----|
| S05(H)(I)S05-2W | 5VDC(±5%) | 5VDC | 400 | ≥72% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)(I)S09-2W | | 9VDC | 222 | ≥72% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)(I)S12-2W | | 12VDC | 167 | ≥76% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)(I)S15-2W | | 15VDC | 133 | ≥76% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)(I)S24-2W | | 24VDC | 83 | ≥78% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)(I)D05-2W | | ±5VDC | ±200 | ≥72% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)D09-2W | | ±9VDC | ±111 | ≥72% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)D12-2W | | ±12VDC | ±83 | ≥76% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)D15-2W | | ±15VDC | ±66 | ≥76% | 1500VDC 3000VDC | 25 | SIP | |
| S05(H)D24-2W | | ±24VDC | ±41 | ≥78% | 1500VDC 3000VDC | 25 | SIP | |
| S05TD0515-2W | | +5VDC/+15VDC | +220/+60 | ≥78% | 1500VDC | 25 | SIP | |
| S05TD1515-2W | | +15VDC/+15VDC | +60/+60 | ≥78% | 1500VDC | 25 | SIP | |



定电压2W模块电源参数

| 型号 | 输入电压 (V) | 输出电压 ($V_o \pm 2\%$) ($V_o \pm 4\%$) | 满载输出电流 (mA) | 效率 | 隔离耐压 VDC | 重量 (g) ± 05 | 封装 | 认证 |
|-----------------|--------------------|--|----------------|-------------|--------------------|--------------------|-----|------------|
| S12(H)(I)S05-2W | 12VDC($\pm 5\%$) | 5VDC | 400 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | CE RoHS |
| S12(H)(I)S09-2W | | 9VDC | 222 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)(I)S12-2W | | 12VDC | 167 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)(I)S15-2W | | 15VDC | 133 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)(I)S24-2W | | 24VDC | 83 | $\geq 78\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)(I)D05-2W | | ± 5 VDC | ± 200 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)D09-2W | | ± 9 VDC | ± 111 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)D12-2W | | ± 12 VDC | ± 83 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)D15-2W | | ± 15 VDC | ± 66 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12(H)D24-2W | | ± 24 VDC | ± 41 | $\geq 78\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S12TD0515-2W | | +5VDC/+15VDC | +220/+60 | $\geq 78\%$ | 1500VDC | 25 | SIP | |
| S12TD1515-2W | | +15VDC/+15VDC | +60/+60 | $\geq 78\%$ | 1500VDC | 25 | SIP | |
| S15(H)(I)S05-2W | 15VDC($\pm 5\%$) | 5VDC | 400 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)(I)S09-2W | | 9VDC | 222 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)(I)S12-2W | | 12VDC | 167 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)(I)S15-2W | | 15VDC | 133 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)(I)S24-2W | | 24VDC | 83 | $\geq 78\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)(I)D05-2W | | ± 5 VDC | ± 200 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)D09-2W | | ± 9 VDC | ± 111 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)D12-2W | | ± 12 VDC | ± 83 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)D15-2W | | ± 15 VDC | ± 66 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15(H)D24-2W | | ± 24 VDC | ± 41 | $\geq 78\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S15TD0515-2W | | +5VDC/+15VDC | +220/+60 | $\geq 78\%$ | 1500VDC | 25 | SIP | |
| S15TD1515-2W | | +15VDC/+15VDC | +60/+60 | $\geq 78\%$ | 1500VDC | 25 | SIP | |



定电压2W模块电源参数

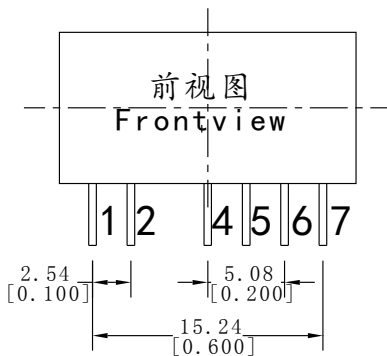
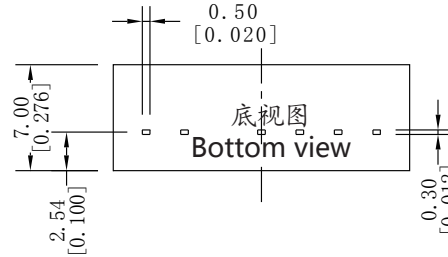
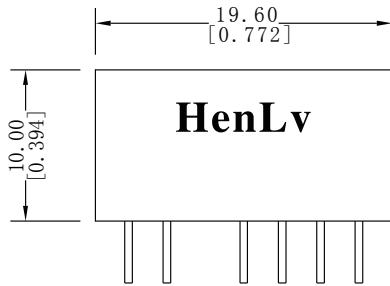
| 型号 | 输入电压 (V) | 输出电压 ($V_o \pm 2\%$) ($V_o \pm 4\%$) | 满载输出电流 (mA) | 效率 | 隔离耐压 VDC | 重量 (g) ± 05 | 封装 | 认证 |
|-----------------|--------------------|--|----------------|-------------|--------------------|--------------------|-----|----|
| S24(H)(I)S05-2W | 24VDC($\pm 5\%$) | 5VDC | 400 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)(I)S09-2W | | 9VDC | 222 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)(I)S12-2W | | 12VDC | 167 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)(I)S15-2W | | 15VDC | 133 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)(I)S24-2W | | 24VDC | 83 | $\geq 78\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)(I)D05-2W | | ± 5 VDC | ± 200 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)D09-2W | | ± 9 VDC | ± 111 | $\geq 72\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)D12-2W | | ± 12 VDC | ± 83 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)D15-2W | | ± 15 VDC | ± 66 | $\geq 76\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24(H)D24-2W | | ± 24 VDC | ± 41 | $\geq 78\%$ | 1500VDC 3000VDC | 25 | SIP | |
| S24TD0515-2W | | +5VDC/+15VDC | +220/+60 | $\geq 78\%$ | 1500VDC | 25 | SIP | |
| S24TD1515-2W | | +15VDC/+15VDC | +60/+60 | $\geq 78\%$ | 1500VDC | 25 | SIP | |



外形尺寸及引脚定义

SXX(H) (I) SXX-2W系列(SIP)
 SXXSXX-2W系列(SIP)
 SXX(H) (I) DXX-2W系列(SIP)
 SXXTDXX-2W系列(SIP)

19.60×7.00×10.00mm



尺寸单位: mm[inch]
 端子直径公差: ±0.10[±0.004]
 未标注公差: ±0.25[±0.010]

| 引脚 | SXX(I)SXX-2W | SXX(I)DXX-2W | SXXH(I)SXX-2W | SXXH(I)DXX-2W | SXXTDXX-2W |
|----|--------------|--------------|---------------|---------------|------------|
| 1 | Vin | Vin | Vin | Vin | Vin |
| 2 | GND | GND | GND | GND | GND |
| 4 | 0V | -XXVDC | No Pin | No Pin | 0V1 |
| 5 | No Pin | GOM | 0V | -XXVDC | Vo1 |
| 6 | +XXVDC | +XXVDC | No Pin | GOM | 0V2 |
| 7 | No Pin | No Pin | +XXVDC | +XXVDC | Vo2 |



电特性

电特性

| 特性 | 符号 | 条 件 除另有规定外 $V_i, -40^{\circ}\text{C} \leq T_c \leq 85^{\circ}\text{C}$ | 极限值 | | 单 位 |
|--------|-------------|--|----------------|---|-----|
| | | | 最小 | 最大 | |
| 输出电压 | V_o | 满载 | $V_o - 4\%V_o$ | $V_o + 4\%V_o$ | V |
| 最大输出电流 | $I_{o\max}$ | - | - | $\frac{P_o (\text{输出功率})}{U_o (\text{输出电压})}$ | A |
| 输出纹波电压 | V_{p-p} | 满载, V_i , BW=20MHz, 常温 | $50 \pm 10\%$ | $300 \pm 10\%$ | mV |
| 电压调整率 | S_v | $V_{i\min}$, V_i , $V_{i\max}$, 满载 | - | 2.00 | % |
| 负载调整率 | S_i | V_i , $I_o = (10\% \sim 100\%)I_{o\max}$ | - | 1.00 | % |
| 效率 | η | V_i , 满载, 常温 | 72.00 | - | % |
| 绝缘电阻 | RI | 输入负、输出地之间加1000VDC 常温, $t \geq 3\text{S}$ | 50 | - | MΩ |

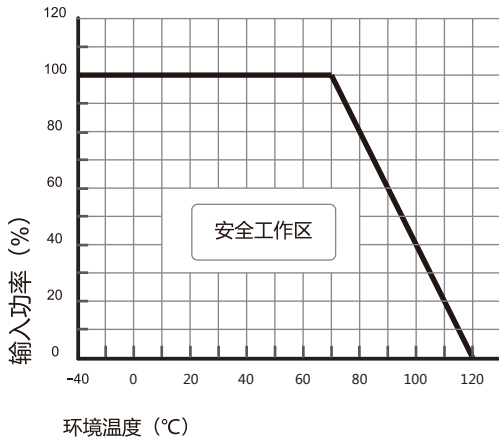
一般特性

| | | |
|------|----------------------|-------------|
| 电磁兼容 | 磁场敏感度试验 | GB6833.2-87 |
| | 静电放电敏感度试验 | GB6833.3-87 |
| | 辐射敏感度试验 | GB6833.5-87 |
| | 传导敏感度试验 | GB6833.6-87 |
| 温漂 | 0.03%/°C | |
| 频率 | 50K HZ~300K HZ (MAX) | |
| 湿度 | 90% (max) | |
| 漏电流 | 无 | |
| MTBF | >500,000小时 | |

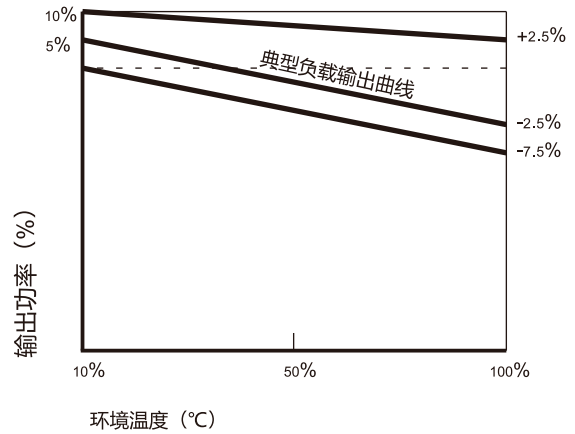


温度曲线图、误差包络曲线图

典型效率曲线

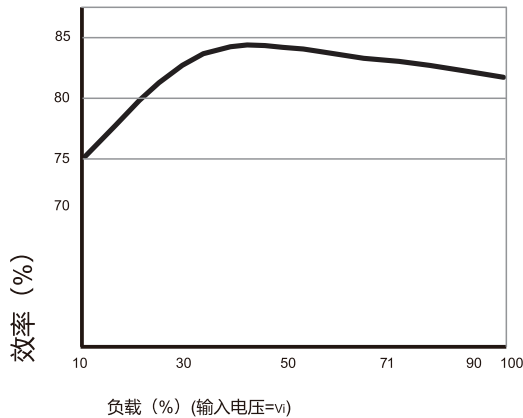


温度曲线图

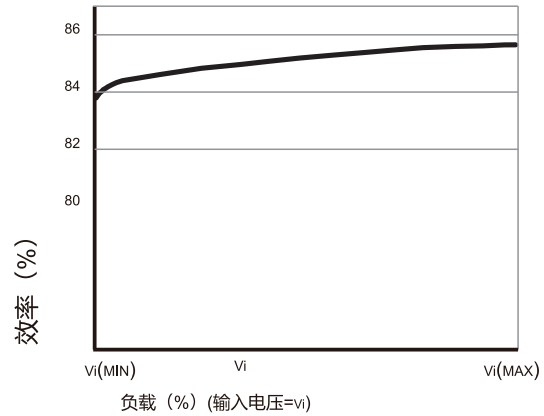


误差包络曲线图

典型效率曲线



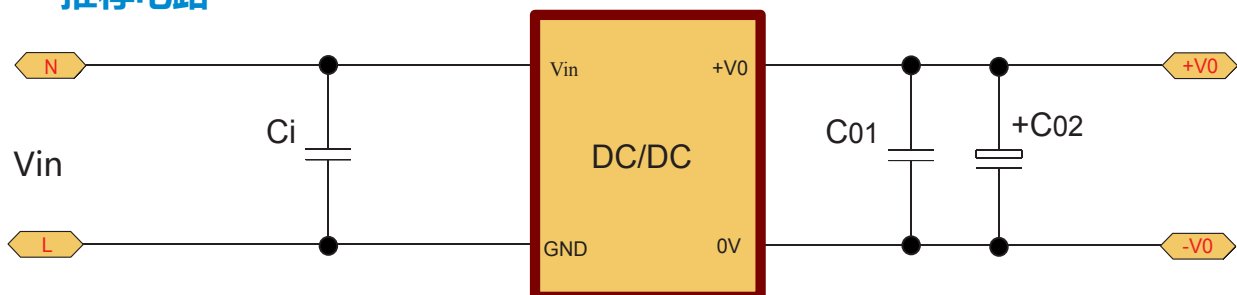
效率/负载曲线图



效率/输入电压曲线图

典型应用

推荐电路





典型应用

• 推荐测试

滤波：在一些对噪声和纹波敏感的电路中，可在DC/DC输入端和输出端外接滤波电容，降低纹波对系统的影响，但滤波电容的取值要适当，若电容太大，很可能造成启动问题，对于每一路输出，在确保安全可靠工作的条件下，其滤波电容的最大容值可以参考外接电容表，为了获得非常低的纹波，可在DC/DC转换器输入输出端接一个“LC”滤波网络，这样滤波的效果会更好，同时应注意到电感值的大小及“LC”滤波网络其自身的频率应于DC/DC模块电源的频率错开，避免相互干扰。对于每一路输出，在确保安全可靠的工作条件下，建议其容性负载值详见（表1）

推荐容性负载值表（表 1）

| 输入电压(Vin+) | 输入电容(Cin) | 输出电压(Vout) | 输出电容(Cout) |
|------------|-----------|------------|------------|
| 5V | 1uF | 3.3V | 4.7uF |
| 12V | 4.7uF | 9V | 2.2uF |
| 24V | 1uF | 15V | 0.47uF |

说明事项

• 包装

本系列模块采用防静电防震包装管包装。



• 运输

装有模块的包装允许用任何运输工具运输，运输中应避免雨雪的直接淋袭和机械损伤。

• 贮存

模块应贮存在环境温度为-40度~125度，相对湿度10%~90%，周围环境无酸性、碱性及其它有害的气体的库房中。

以上均为本手册所列产品系列之性能指标，非标准型号产品的某些指标会超出上述要求，如此手册出现与产品规格文件不一致的情况，请以规格文件为准，有特殊需求可直接与我公司联系。