



## 特 点

- \* 外形尺寸: 50.8 × 50.8 × 12.7 mm
- \* 2: 1 电压输入范围
- \* 固定开关频率
- \* 六面金属封装

## Features

- \* Small Size: 2.00 × 2.00 × 0.50 inch
- \* 2: 1 Input Voltage Range
- \* Constant Frequency
- \* Encapsulated in Metal Cases

## 输入特性(Input)

注释(Notes and Conditions)

| 输入特性(Input)                           |         |                              | 注释(Notes and Conditions)     |
|---------------------------------------|---------|------------------------------|------------------------------|
| 输入电压范围(Input Voltage Range)           |         |                              |                              |
| 标称(Nominal)                           | 12Vdc   | 9~18Vdc                      | 25Vdc Max                    |
| 标称(Nominal)                           | 24Vdc   | 18~36Vdc                     | 40Vdc Max                    |
| 标称(Nominal)                           | 48Vdc   | 36~72Vdc                     | 80Vdc Max                    |
| 遥控功能(Remote On/Off Function)          |         |                              |                              |
| 正逻辑(Positive Logic)                   | 开启(On)  | 高电平或悬空                       | 相对于 -Vin (Reference to -Vin) |
|                                       |         | (High Level or Open Circuit) |                              |
|                                       | 关闭(Off) | 零电平或短路                       |                              |
|                                       |         | (Connect to -Vin)            |                              |
| 输入欠压保护(Input Undervoltage Protection) |         | < Vimin                      |                              |
| 输入过压保护(Input Overvoltage Protection)  |         | > Vimax                      |                              |

## 输出特性(Output)

注释(Notes and Conditions)

| 输出电压精度(Voltage Set-Point Accuracy)     | ± 1%; T: 2/3, ± 2%                                                           | V <sub>in</sub> and I <sub>on</sub>                    |
|----------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------|
| 源效应(Line Regulation)                   | S: ± 0.2%V <sub>o</sub> ; D: 1, ± 0.2%V <sub>o</sub> ; 2, ± 1%V <sub>o</sub> | V <sub>imin</sub> ~V <sub>imax</sub> , I <sub>on</sub> |
|                                        | T: ± 1%V <sub>o</sub>                                                        |                                                        |
| 负载效应(Load Regulation) <sup>1</sup>     | S: ± 0.5%V <sub>o</sub> ; D: 1, ± 0.5%V <sub>o</sub> ; 2, ± 5%V <sub>o</sub> | 10%~100%I <sub>on</sub> , V <sub>in</sub>              |
|                                        | T: 1, ± 1%V <sub>o</sub> ; 2/3, ± 6%V <sub>o</sub>                           |                                                        |
| 瞬态响应(Dynamic Response)                 |                                                                              |                                                        |
| 过冲幅度(Peak Deviation)                   | ± 5%V <sub>o</sub>                                                           | 25%-50%-25% of I <sub>on</sub>                         |
| 恢复时间(Settling Time)                    | 200 μs                                                                       | and 50%-75%-50% of I <sub>on</sub>                     |
| 输出电压调节范围(Voltage Trim Range)           | ± 10%                                                                        |                                                        |
| 输出过流保护点(Current Limit Threshold Range) | 110%~150%I <sub>o</sub>                                                      |                                                        |
| 短路保护(Short-Circuit Protection)         | 连续可恢复<br>(Continuous, Automatic Recovery)                                    |                                                        |

## 一般特性(General)

注释(Notes and Conditions)

| 温度系数(Temperature Coefficient)    | ± 0.02%/℃                |              |
|----------------------------------|--------------------------|--------------|
| 隔离电压(Isolation Voltage)          |                          |              |
| 输入与输出(Input-Output)              | 1000Vdc 1min             |              |
| 输入与外壳(Input-Case)                | 500Vdc or 350Vac 1min    |              |
| 输出与外壳(Output-Case)               | 500Vdc or 350Vac 1min    |              |
| 工作壳温(Operating Case Temperature) | - 25℃~+ 85℃              |              |
| 贮存温度(Storage Temperature)        | - 40℃~+ 125℃             |              |
| 冷却方式(Cooling)                    | 自然冷却(Natural Convection) |              |
| 平均故障间隔时间(MTBF)                   | 2 × 10 <sup>5</sup> h    | MIL-HDBK-217 |
| 重量(Weight)                       | 70g                      |              |

注(Notes): 1 双路输出平衡加载(Dual Output, For Balanced Loads)

# SF-25~40W Series

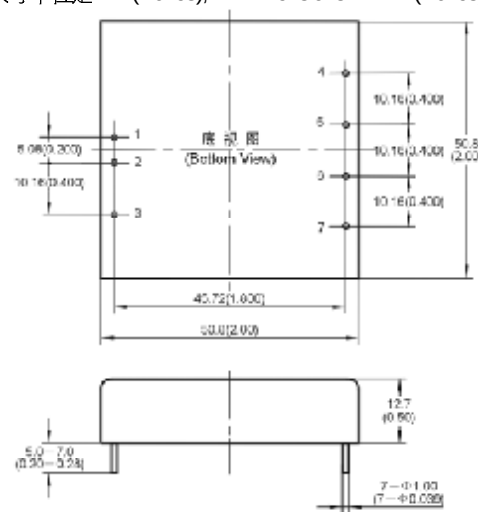


## 型号列表 (Models)

| 产品型号<br>(Model Number) | 标称输入电压<br>(Input Voltage)<br>Vdc | 标称输出电压<br>(Output Voltage)<br>Vdc | 标称负载<br>(Output Current)<br>A | 额定输出功率<br>(Output Power)<br>W | 效率<br>(Efficiency)<br>% | 输出杂音电压峰值<br>(Ripple and Noise)<br>mVp-p |
|------------------------|----------------------------------|-----------------------------------|-------------------------------|-------------------------------|-------------------------|-----------------------------------------|
| SF48S3V3-25W           | 48                               | 3.30                              | 6.00                          | 19.8                          | 80                      | 50                                      |
| SF48S3V3-25W/H         | 48                               | 3.30                              | 7.50                          | 25                            | 83                      | 50                                      |
| SF48S5-25W             | 48                               | 5.00                              | 5.00                          | 25                            | 80                      | 50                                      |
| SF48S5-25W/Z           | 48                               | 5.00                              | 5.00                          | 25                            | 80                      | 50                                      |
| SF48S8-25W             | 48                               | 8.00                              | 3.13                          | 25                            | 82                      | 100                                     |
| SF48S10-25W            | 48                               | 10.00                             | 2.50                          | 25                            | 82                      | 100                                     |
| SF48S12-25W            | 48                               | 12.00                             | 2.10                          | 25                            | 82                      | 100                                     |
| SF48S15-25W            | 48                               | 15.00                             | 1.65                          | 25                            | 84                      | 100                                     |
| SF48D3V305-25W         | 48                               | +3.3/+5.0                         | +6.0/+1.0                     | 25                            | 80                      | 50                                      |
| SF48D5-25W             | 48                               | ± 5.00                            | ± 2.50                        | 25                            | 80                      | 50                                      |
| SF48D5-25W/U           | 48                               | ± 5.00                            | +4.0/-1.0                     | 25                            | 80                      | 50                                      |
| SF48D12-25W            | 48                               | ± 12.0                            | ± 1.04                        | 25                            | 82                      | 100                                     |
| SF48D15-25W            | 48                               | ± 15.0                            | ± 0.85                        | 25                            | 80                      | 100                                     |
| SF24S3V3-25W           | 24                               | 3.30                              | 6.00                          | 19.8                          | 80                      | 50                                      |
| SF24S5-25W             | 24                               | 5.00                              | 5.00                          | 25                            | 82                      | 50                                      |
| SF24S6-25W             | 24                               | 6.00                              | 4.16                          | 25                            | 81                      | 50                                      |
| SF24S12-25W            | 24                               | 12.00                             | 2.10                          | 25                            | 82                      | 100                                     |
| SF24S15-25W            | 24                               | 15.00                             | 1.65                          | 25                            | 84                      | 100                                     |
| SF24S24-25W            | 24                               | 24.00                             | 1.05                          | 25                            | 86                      | 20                                      |
| SF24D5-25W             | 24                               | ± 5.00                            | ± 2.50                        | 25                            | 80                      | 50                                      |
| SF24D12-25W            | 24                               | ± 12.0                            | ± 1.05                        | 25                            | 82                      | 100                                     |
| SF24D15-25W            | 24                               | ± 15.0                            | ± 0.85                        | 25                            | 82                      | 100                                     |
| SF24T0512-15W          | 24                               | +5.0/+11.6                        | +1.5/+0.25                    | 13.5                          | 80                      | 50/120                                  |
| SF24T0515-15W          | 24                               | +5.0/±15.0                        | +1.5/±0.25                    | 15                            | 82                      | 50/100                                  |
| SF24T0515-25W          | 24                               | +5.0/±15.0                        | +3.5/±0.25                    | 25                            | 82                      | 50/100                                  |
| SF12S5-25W             | 12                               | 5.00                              | 5.00                          | 25                            | 80                      | 50                                      |
| SF12S12-25W            | 12                               | 12.00                             | 2.10                          | 25                            | 81                      | 100                                     |
| SF12D12-25W            | 12                               | ± 12.0                            | ± 1.05                        | 25                            | 82                      | 100                                     |
| SF12D1205-25W          | 12                               | +12.0/+5.0                        | +1.5/+1.0                     | 23                            | 80                      | 100/50                                  |
| SF12D15-25W            | 12                               | + 15.0                            | + 0.85                        | 25                            | 81                      | 100                                     |
| SF24S5-30W             | 24                               | 5.00                              | 6.00                          | 30                            | 82                      | 50                                      |
| SF24S15-30W            | 24                               | 15.00                             | 2.00                          | 30                            | 84                      | 100                                     |
| SF24D15-30W            | 24                               | + 15.0                            | + 1.0                         | 30                            | 83                      | 100                                     |
| SF48D5-30W             | 48                               | ± 5.1                             | +5.0/-1.0                     | 30                            | 82                      | 50                                      |
| SF48S9-40W             | 48                               | 9.00                              | 4.45                          | 40                            | 87                      | 100                                     |
| SF48S15-40W            | 48                               | 15.00                             | 2.67                          | 40                            | 87                      | 100                                     |
| SF48D9-40W             | 48                               | ± 9.00                            | ± 2.20                        | 40                            | 87                      | 100                                     |

## 安装尺寸 (Mechanical Drawing)

尺寸单位是 mm(inches); All Dimensions in mm (inches)



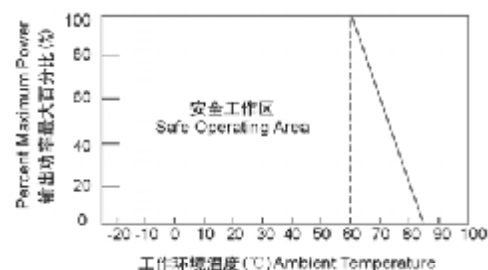
## 引脚定义 (Pin Definition)

| 引脚(Pin) | 单路(Single) | 双路(Dual) | 参路(Friple) |
|---------|------------|----------|------------|
| 1       | +Vin       | +Vin     | +Vin       |
| 2       | -Vin       | -Vin     | -Vin       |
| 3       | Rem        | Rem      | Rem        |
| 4       | N P        | +Vo1     | +Vo2       |
| 5       | +Vout      | COM      | +Vo1       |
| 6       | -Vout      | -Vo2     | COM        |
| 7       | Trim       | Trim     | -Vo3       |

## 未注公差按下表

| (Tolerances Unless Otherwise Specified) |             |
|-----------------------------------------|-------------|
| mm                                      | inches      |
| .x ±0.5                                 | .xx ±0.02   |
| .xx ±0.13                               | .xxx ±0.005 |

## 温度降额曲线 (Temperature Derating Curve)



注: 除非另有说明, 指标一般在标称输入电压、满载和 25℃ 环境温度下测得。

Note: All specifications are typical at nominal input ,full load at 25℃ unless otherwise stated.