

## 典型性能 Features

- ◆ 30 瓦功率输出 (30 Watts of Output Power)
- ◆ 超宽电压输入 (4:1 Wide Range Input)
- ◆ 长期短路保护, 自恢复 (Short Circuit Protection ,Automatic Recovery)
- ◆ 小型化封装 (Small Package)



## 电气特性 Electrical Specifications

输入特性 Input	Min	Type	Max	Notes
输入电压范围	9V	24V	36V	
Input Voltage Range	18V	48V	72V	
控制功能		ON		CNT 悬空或接TTL高电平 CNT pin left open or CNT pin connected to TTL logic high
ON/OFF Control		OFF		CNT 与-Vin 相连 CNT pin is at a logic low
逻辑低 Logic Low			1.2 V	
输入欠压保护	6V		9V	24V输入
Input. Under-voltage Lockout	13V		18V	48V输入
启动延时时间 Start-up Delay Time		10mS		
输出特性 Output	Min	Type	Max	Notes
输出电压精度 Set point Accuracy			±1%	
负载效应 Load Regulation			±0.5%	
源效应 Line Regulation			±0.2%	
输出电压调节 TRIM Range			±10%	
动态响应 Dynamic Response			4% Vo Pk deviation 400μS settling time	50~75% load 50~25% load
温度系数 Temperature Regulation		±0.2%/°C		
输出过流保护 Current Limit Threshold	110%		160%	
输出过压保护 Over-voltage Protection	110%		140%	
短路保护 Short-Circuit Protection	长期短路自恢复 Continuous, Automatic Recovery			
综合特性 General	Min	Type	Max	Notes
隔离电压 Isolation Voltage	1500Vdc			INPUT TO OUT

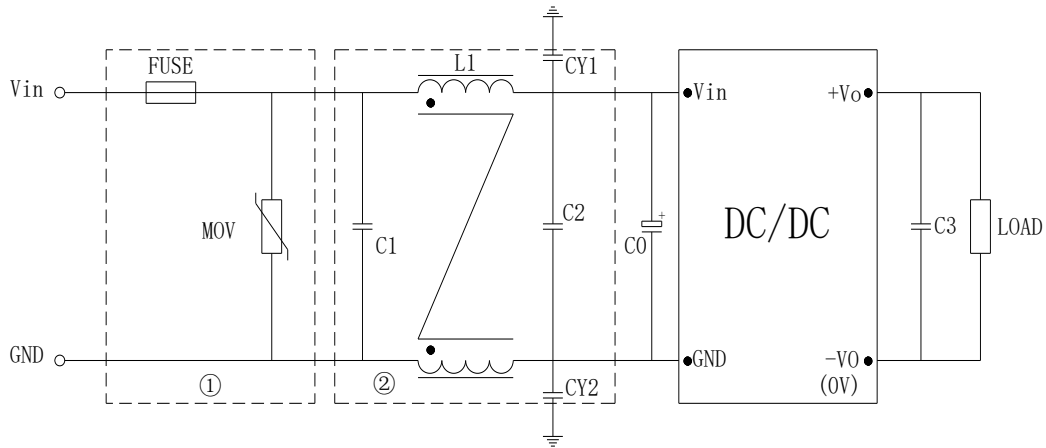
开关频率 Switching Frequency		300KHz			
平均故障间隔时间 MTBF		2×10 <sup>6</sup> Hrs		Mil HDBK 217F Tc=25℃	
工作壳温 Case Temperature	工业级	-40℃		+90℃	
	AD、AG 级	-40℃		+95℃	需散热器
	AHII 级	-55℃		+105℃	需散热器
储存温度 Storage Temperature		-55℃		+125℃	
相对湿度 Relative Humidity		10%		90%	
管脚焊接温度 Pin Solder Temperature				250℃	Wave Solder <10S
手工焊接时间 Hand Soldering Time				5S	Iron Temperature 425℃
传导 Conducted Emission	GB9254/CISPR22/EN55022 Class B (推荐电路见图)				
静电放电 Electrostatic Discharge	GB17626/EN61000-4-2 Contact ±6KV air ±8KV perf. Criteria A				
浪涌抗扰度 Surge Immunity	GB17626/EN61000-4-5 ±2KV (推荐电路见图) perf. Criteria A				
脉冲群抗扰度 Electrical Fast Transient	GB17626/EN61000-4-4 ±2KV (推荐电路见图) perf. CriteriaA				

型号 Models	输入电压范围 Input Voltage Range	输出电压 (Vdc) Output Voltage	输出电流 (A) Output current	纹波噪声(mv) Ripple and noise	典型效率 Efficiency	容性负载(μF) Max.Capacitor Load
WSD30-24S3V3	9-36V	3.3	6.0	50	86%	6800
WSD30-24S5	9-36V	5.05	6.0	50	88%	6800
WSD30-24S9	9-36V	9	3.33	100	88%	680
WSD30-24S12	9-36V	12	2.5	100	88%	680
WSD30-24S15	9-36V	15	2.0	100	88%	680
WSD30-24S24	9-36V	24	1.25	100	88%	470
WSD30-24S48	9-36V	48	0.625	300	88%	220
WSD20-48S3V3	18-72V	3.3	6.0	50	88%	6800
WSD30-48S5	18-72V	5.05	6.0	50	88%	6800
WSD30-48S9	18-72V	9	3.33	100	89%	680
WSD30-48S12	18-72V	12	2.5	100	89%	680
WSD30-48S15	18-72V	15	2.0	100	89%	680

WSD30-48S24	18-72V	24	1.25	100	88%	470
WSD30-48S48	18-72V	48	0.625	300	88%	220
WSD30-24D5	9-36V	±5.05	±3.0	50	86%	2200
WSD30-24D12	9-36V	±12.0	±1.25	100	88%	1000
WSD30-24D15	9-36V	±15.0	±1.0	100	88%	680
WSD30-48D5	18-72V	±5.05	±3.0	50	86%	2200
WSD30-48D12	18-72V	±12.0	±1.25	100	88%	1000
WSD30-48D15	18-72V	±15.0	±1.0	100	88%	680

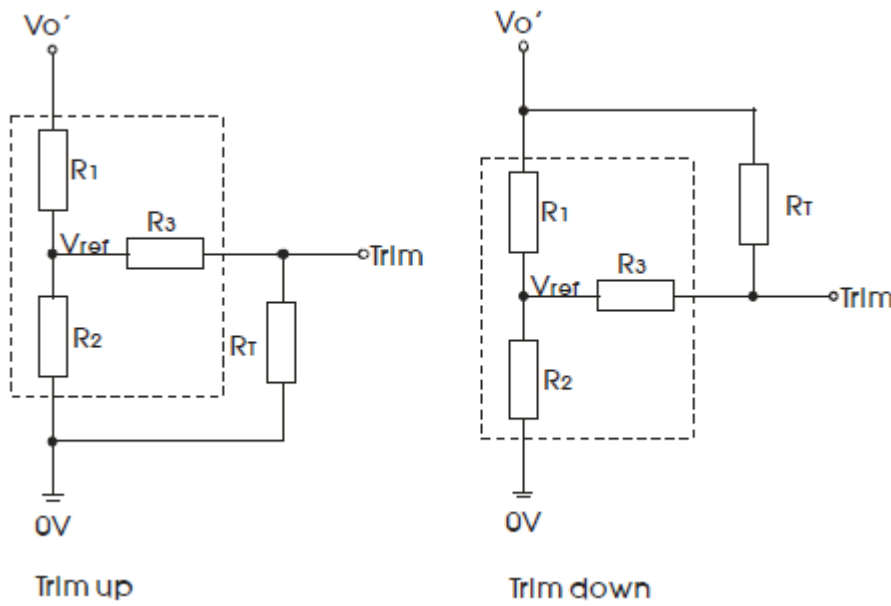
■说明：仅列出典型型号，其它型号，请确定功率，输入电压及输出电压，致电我公司。  
尾缀带 H 的产品标配散热器

## 电磁兼容应用（EMC）



型号	Vin: 24V	Vin: 48V
FUSE	6A 慢熔	4A 慢熔
MOV	14D101K	14D101K
C0	220μF/50V	100μF/100V
C1、C2	4.7μF/50V	2.2μF/100V
C3	100μF	
LCM	3mH	
CY1、CY2	4.7nF Y2 安规电容	

输出调节应用 (TRIM Function)

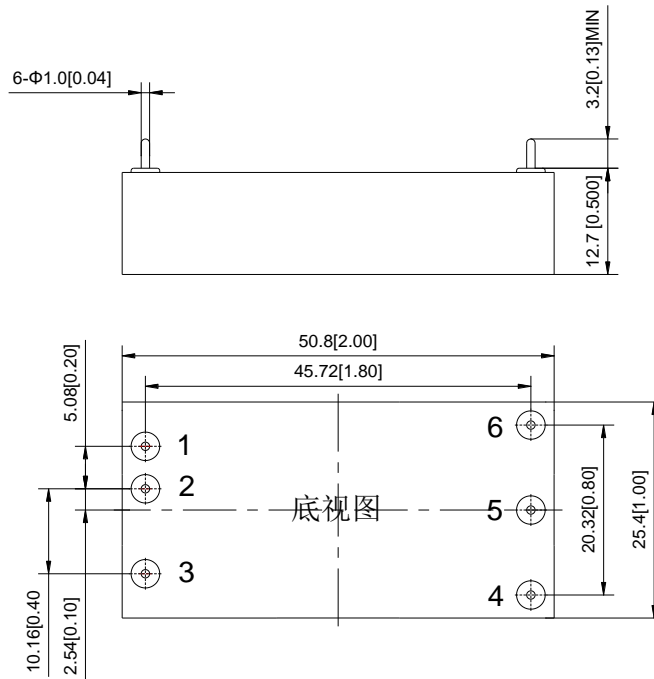


$$up : R_T = \frac{TR_2}{R_2 - T} - R_3 \quad T = \frac{V_{ref}}{V_{o'} - V_{ref}} \cdot R_1 \text{ (调高电压)}$$

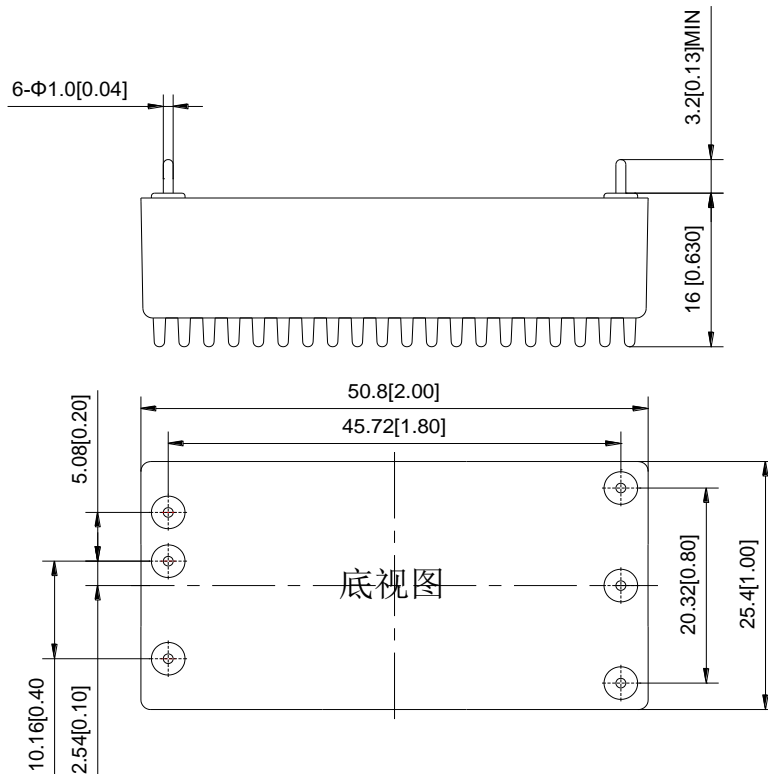
$$down : R_T = \frac{TR_1}{R_1 - T} - R_3 \quad T = \frac{V_{o'} - V_{ref}}{V_{ref}} \cdot R_2 \text{ (调低电压)}$$

Vout (V)	R1(KΩ)	R2(KΩ)	R3(KΩ)	Vref(V)
3.3	3.32	2.0	8.2	1.24
5	2.55	2.49	8.2	2.5
9	6.49	2.49	10	2.5
12	9.53	2.49	12	2.5
15	12.5	2.49	15	2.5
24	21.5	2.49	20	2.5
48	45.3	2.49	22	2.5

## 机械图及管脚说明 (Mechanical Chart、Pins) (Unit: mm/inch)



带散热器型



管脚 Pin	1	2	3	4	5	6
单路	+Vin	-Vin	CNT	TRIM	-Vo	+Vo
双路	+Vin	-Vin	CNT	-Vo	COM	+Vo

注:安装定位尺寸公差按 GB/T1804-2000 F 级标准、外型尺寸公差按 GB/T1804-2000 C 级标准