

典型性能 Features

- ◆ 30-50 瓦功率输出 (30-50 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 Input Voltage Range	40V	110V	160V	
	9V	24V	36V	
控制功能 ON/OFF Control		ON		CNT 悬空或接TTL高电平 CNT pin left open or CNT pin connected to TTL logic high
		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 Input Under-voltage Lockout	30V		40V	110V输入
	7V		9V	24V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%	
过温度保护 Over Temperature Protection	105°C	115°C	125°C	
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	2000VAC			110V INPUT TO OUT
	1500VAC			24V INPUT TO OUT
开关频率 Switching Frequency		300KHz		
平均故障间隔时间 MTBF		2×10 ⁶ Hrs		Mil HDBK 217F Tc=25℃
工作壳温 Case Temperature	铁路级	-40℃	+95℃	
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 A (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. Criteria A			

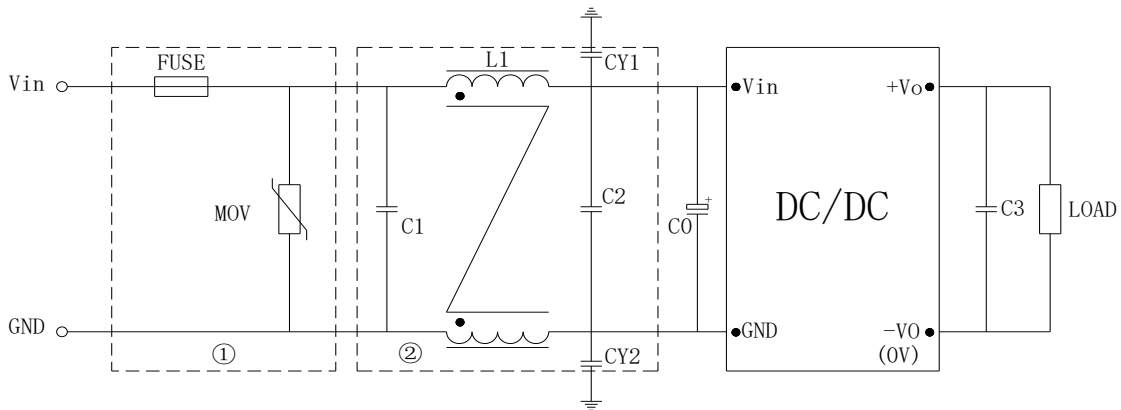
产品型号列表 Product Model List

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
WRSD30-110S3V3	40-160V	3.3	6	50	86%	6800
WRSD30-110S5	40-160V	5.05	6	50	90%	6800
WRSD30-110S12	40-160V	12	2.5	100	90%	680
WRSD30-110S15	40-160V	15	2	100	90%	680
WRSD30-110S24	40-160V	24	1.25	100	89%	470
WRSD50-110S3V3	40-160V	3.3	10	50	86%	6800
WRSD50-110S5	40-160V	5.05	10	50	89%	6800
WRSD50-110S12	40-160V	12	4.17	100	90%	680
WRSD50-110S15	40-160V	15	3.33	100	90%	680
WRSD50-110S24	40-160V	24	2.08	100	89%	470
WRSD50-110S36	40-160V	36	1.39	200	89%	470
WSRD50-110S48	40-160V	48	1.04	480	88%	220

WRSD50-110S54	40-160V	54	0.92	480	89%	470
WRSD30-24S3V3	9V-36V	3.3	6	50	86%	6800
WRSD30-24S5	9V-36V	5.05	6	50	90%	6800
WRSD30-24S12	9V-36V	12	2.5	100	90%	680
WRSD30-24S15	9V-36V	15	2	100	90%	680
WRSD30-24S24	9V-36V	24	1.25	100	89%	470
WRSD50-24S3V3	9V-36V	3.3	10	50	86%	6800
WRSD50-24S5	9V-36V	5.05	10	50	90%	6800
WRSD50-24S12	9V-36V	12	4.17	100	91%	680
WRSD50-24S15	9V-36V	15	3.33	100	91%	680
WRSD50-24S24	9V-36V	24	2.08	100	89%	470
WRSD50-24S36	9V-36V	36	1.39	200	89%	470
WRSD50-24S48	9V-36V	48	1.04	480	88%	220
WRSD50-24S54	9V-36V	54	0.92	480	89%	470

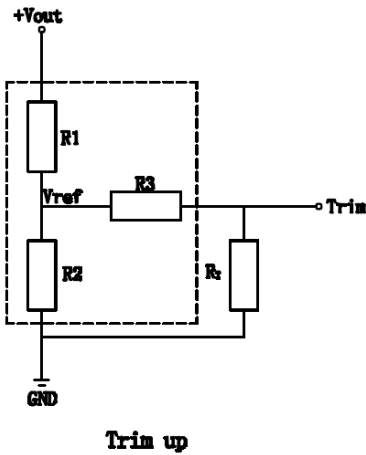
■说明：仅列出典型型号，其它型号，请确定功率，输入电压及输出电压，致电我公司。
尾缀带 H 的产品标配散热器

电磁兼容应用（EMC）



型号	Vin: 110V
FUSE	6A 慢熔
MOV	14D201K
C0	100μF/250V
C1、C2	1μF/250V
C3	100μF
LCM	10mH
CY1、CY2	2.2nF Y2 安规电容

输出调节应用 (TRIM Function)



$$up : R_T = \frac{TR_2}{R_2 - T} - R_3$$

$$T = \frac{V_{ref}}{V_o' - V_{ref}} \cdot R_1$$

$$down : R_T = \frac{TR_1}{R_1 - T} - R_3$$

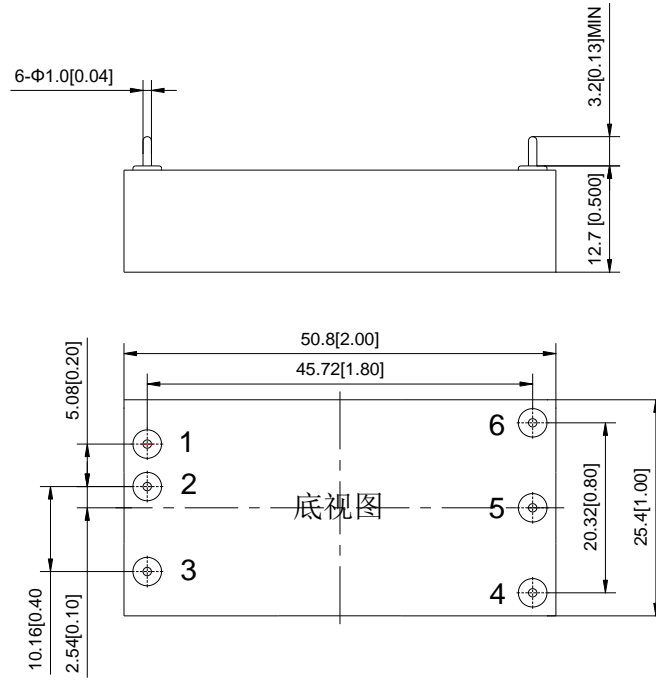
$$T = \frac{V_o' - V_{ref}}{V_{ref}} \cdot R_2$$

Trim up

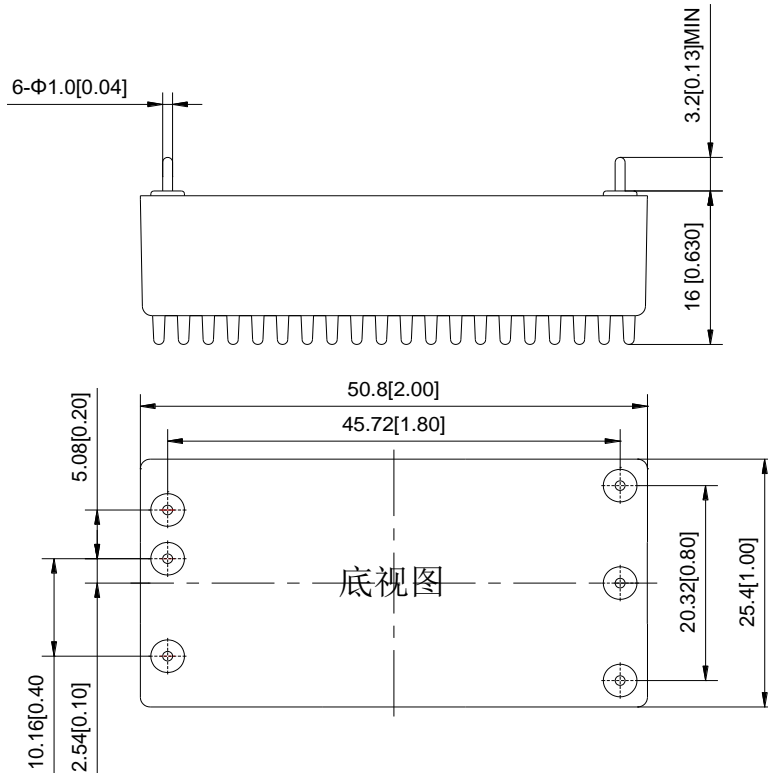
Vout (V)	R1(KΩ)	R2(KΩ)	R3(KΩ)	Vref(V)
3.3	3.32	2.0	8.2	1.24
5	2.55	2.49	8.2	2.5
12	9.53	2.49	12	2.5
15	12.5	2.49	15	2.5
24	21.5	2.49	20	2.5
36	33.51	2.49	20	2.5
48	45.3	2.49	20	2.5
54	51.5	2.49	20	2.5

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

标准型



带散热器尾缀加 H



管脚 Pin	1	2	3	4	5	6
功能 Function	+Vin	-Vin	CNT	TRIM	-Vo	+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。