

典型性能 Features

- ◆ 20 瓦功率输出 (20 Watts of Output Power)
- ◆ 超宽电压输入 (4: 1Wide 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	9V	12V/24V	36V	
	18V	24V/48V	72V	
	66V	74V/110V	160V	
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	6V		9V	9-36V 输入
	13V		18V	18-72V 输入
	50V		66V	66-160V 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%	一路
			±3%	二路
负载效应 Load Regulation			±0.5%	二路
源效应 Line Regulation			±0.2%	二路
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%	

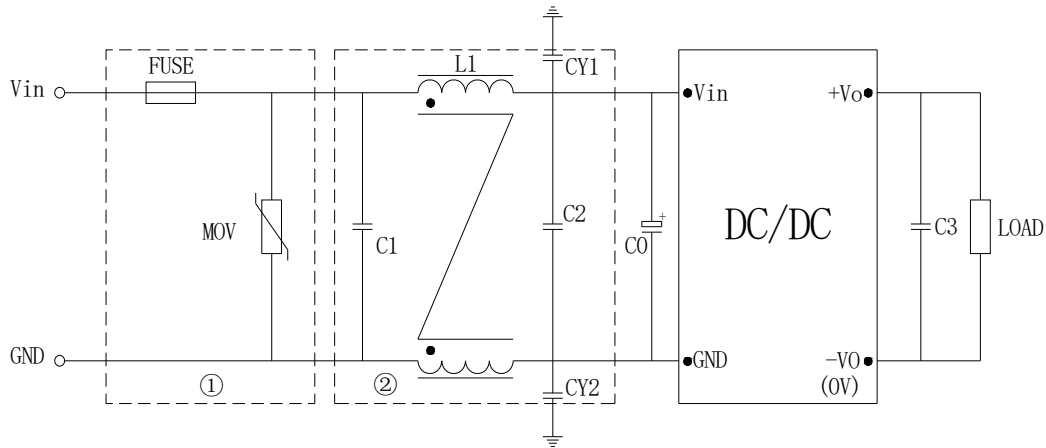
输出过压保护 Over-voltage Protection	110%		140%	
短路保护 Short-Circuit Protection	长期短路自恢复 Continuous, Automatic Recovery			
综合特性 General	Min	Type	Max	Notes
隔离电压 Isolation Voltage	1500Vdc			INPUT TO OUT
开关频率 Switching Frequency		300KHz		
平均故障间隔时间 MTBF		2×10 ⁶ Hrs		Mil HDBK 217F Tc=25℃
工作壳温 Case Temperature	工业级	-25℃		+90℃
	AD、AG 级	-40℃		+90℃
	AHII 级	-55℃		+90℃
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 °C
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 ±4KV			
浪涌抗扰度 Surge Immunity	GB17626/EN61000-4-5 ±2KV (推荐电路见图) perf. Criteria B			
脉冲群抗扰度 Electrical Fast Transient	GB17626/EN61000-4-4 ±2KV (推荐电路见图) perf. Criteria B			

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
WD20-24S3V3WS	9-36V	3.3	5.0	50	86%	6800
WD20-24S5WS	9-36V	5.05	4.0	50	90%	6800
WD20-24S9WS	9-36V	9.00	2.22	100	87%	1000
WD20-24S12WS	9-36V	12	1.67	100	88%	680
WD20-24S15WS	9-36V	15	1.33	100	89%	680
WD20-24S18WS	9-36V	18	1.11	100	89%	470

WD20-24S24WS	9-36V	24	0.83	100	90%	470
WD20-24S48WS	9-36V	48	0.41	200	87%	100
WD20-48S3V3WS	18-72V	3.3	5.0	50	86%	6800
WD20-48S5WS	18-72V	5.05	4.0	50	90%	6800
WD20-48S9WS	18-72V	9.00	2.22	100	89%	1000
WD20-48S12WS	18-72V	12	1.67	100	89%	680
WD20-48S15WS	18-72V	15	1.33	100	89%	680
WD20-48S24WS	18-72V	24	0.83	100	90%	470
WD20-48S48WS	18-72V	48	0.41	200	87%	100
WD20-110S3V3WS	66-160V	3.3	5.0	50	86%	6800
WD20-110S5WS	66-160V	5.05	4.0	50	89%	6800
WD20-110S9WS	66-160V	9.00	2.22	100	89%	1000
WD20-110S12WS	66-160V	12	1.67	100	88%	680
WD20-110S15WS	66-160V	15	1.33	100	88%	680
WD20-110S24WS	66-160V	24	0.83	100	90%	470
WD20-110S48WS	66-160V	48	0.41	200	86%	100
WD20-24D5WS	9-36V	±5.05	±2.0	100	85%	2200
WD20-24D12WS	9-36V	±12	±0.83	100	87%	220
WD20-24D15WS	9-36V	±15	±0.67	100	87%	220
WD20-48D5WS	18-72V	±5.05	±2.0	100	85%	2200
WD20-48D12WS	18-72V	±12	±0.83	100	88%	220
WD20-48D15WS	18-72V	±15	±0.67	100	88%	220
WD20-110D5WS	66-160V	±5.05	±2.0	100	85%	2200
WD20-110D12WS	66-160V	±12	±0.83	100	87%	220
WD20-110D15WS	66-160V	±15	±0.67	100	87%	220

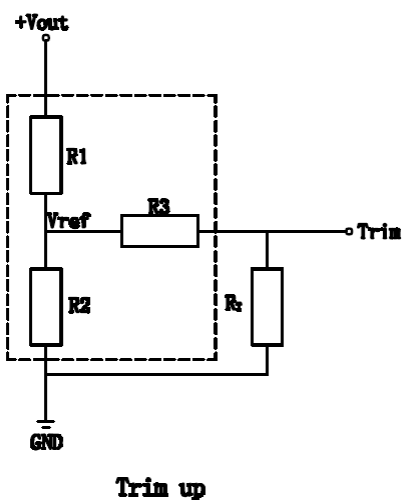
■说明：仅列出典型型号，其它型号，请确定功率，输入电压及输出电压，致电我公司。
尾缀加 H 产品，配散热器。

电磁兼容应用 (EMC)



型号	Vin: 24V	Vin: 48V	Vin: 110V
FUSE	4A 慢熔	2A 慢熔	2A 慢熔
MOV	14D101K	14D101K	14D201K
C0	220μF/50V	100μF/100V	68μF/250V
C1、C2	4.7μF/50V	2.2μF/100V	1μF/250V
C3	100μF		
LCM	1mH		
CY1、CY2	1nF Y2 安规电容		

输出调节应用 (TRIM Function)



电源 TRIM 脚可以实现输出电压调节功能

$$\text{up} : R_T = \frac{TR_2}{R_2 - T} - R_3 \quad T = \frac{V_{ref}}{V_o' - V_{ref}} \cdot R_1$$

$$\text{down} : R_T = \frac{TR_1}{R_1 - T} - R_3 \quad T = \frac{V_o' - V_{ref}}{V_{ref}} \cdot R_2$$

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

