

KEY FEATURES

- Power Module for PCB Mountable
- Smaller Size (2"x1") with High Efficiency
- 2:1 Input Range
- Regulated Output
- Low Ripple and Noise
- Screw Terminal For Optional
- Operating Temperature: -40°C...+85°C (with derating)
- Remote ON/OFF Control (Optional)
- Standard 2" x 1" Package and Pinout
- 2-Years Product Warranty


ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	ST30-24-2.5S	ST30-24-3.3S	ST30-24-5S	ST30-24-12S	ST30-24-15S	ST30-24-24S
Max. Output Wattage (W)	15W	19.8W	30W	30W	30W	30W
Input Voltage (V.DC.)	24V (18-36V)	24V (18-36V)	24V (18-36V)	24V (18-36V)	24V (18-36V)	24V (18-36V)
Output Voltage (V.DC.)	2.5V / 6000mA	3.3V / 6000mA	5V / 6000mA	12V / 2500mA	15V / 2000mA	24V / 1250mA
Efficiency	84%	87%	90%	88%	88%	88%
Capacitor Load (max)	6800uF	6800uF	4700uF	680uF	680uF	120uF

Model No. (Single Output)	ST30-48-2.5S	ST30-48-3.3S	ST30-48-5S	ST30-48-12S	ST30-48-15S	ST30-48-24S
Max. Output Wattage (W)	15W	19.8W	30W	30W	30W	30W
Input Voltage (V.DC.)	48V (36-75V)	48V (36-75V)	48V (36-75V)	48V (36-75V)	48V (36-75V)	48V (36-75V)
Output Voltage (V.DC.)	2.5V / 6000mA	3.3V / 6000mA	5V / 6000mA	12V / 2500mA	15V / 2000mA	24V / 1250mA
Efficiency	85%	88%	90%	88%	88%	88%
Capacitor Load (max)	6800uF	6800uF	4700uF	680uF	680uF	120uF

Model No. (Single Output)	ST30-24-2.5S ST30-48-2.5S	ST30-24-3.3S ST30-48-3.3S	ST30-24-5S ST30-48-5S	ST30-24-12S ST30-48-12S	ST30-24-15S ST30-48-15S	ST30-24-24S ST30-48-24S	
Max Output Wattage (W)	15W	19.8W	30W	30W	30W	30W	
Input	Input Filter π type						
Output	Voltage (V.DC.)	2.5	3.3	5	12	15	24
	Voltage Accuracy	$\pm 2\%$					
	Current (mA) max	6000	6000	6000	2500	2000	1250
	Line Regulation (LL-HL) (typ.)	$\pm 0.5\%$					
	Load Regulation (10-100%) (typ.)	$\pm 1\%$					
	Ripple	2.5S-5S: 50mV / other: $< 0.2\% V_{out} + 40mV$ max (Vp-p)					
	Noise	2.5S-5S: 100mV / other: $< 0.5\% V_{out} + 50mV$ max (Vp-p)					
	Minimum Load	0%	0%	0%	1%	1%	0.5%
Switching Frequency	400KHz						
Protection	Over Power Protection	Works over 120% of rating and recovers automatically.					
	Over Voltage Protection	Zener diode clamp					
	Short Circuit Protection	Current limit, auto-recovery					
Isolation	Voltage	1600 VDC.					
	Resistance	10^8 ohms					
	Capacitance	1000 pF					
Environment	Operating Temperature	-40°C...+85°C (with derating)					
	Storage Temperature	-55°C...+105°C					
	Case Temperature	+105°C max.					
	Temperature Coefficient	$\pm 0.02\%$ Per°C					
	Humidity	95% RH					
	MTBF	$> 550,000$ h @ 25°C (MIL-HDBK-217F)					
Physical	Dimension (L x W x H)	2.0 x 1.0 x 0.433 Inches (50.8 x 25.4 x 11.0 mm) Tolerance ± 0.5 mm					
	Case Material	Five-side shielded Aluminum with Non-Conductive base, Black Anodize					
	Weight	33 g					
	Cooling Method	Free-air convection					

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

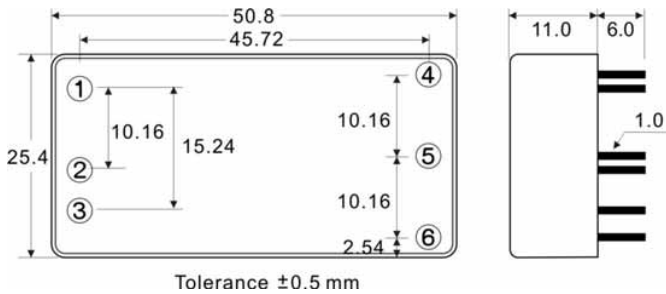
ELECTRICAL SPECIFICATIONS

Model No. (Dual Output)	ST30-24-5D	ST30-24-12D	ST30-24-15D	ST30-48-5D	ST30-48-12D	ST30-48-15D
Max. Output Wattage (W)	24W	30W	30W	25W	30W	30W
Input Voltage (V.DC.)	24V (18-36V)	24V (18-36V)	24V (18-36V)	48V (36-75V)	48V (36-75V)	48V (36-75V)
Output Voltage (V.DC.)	±5V / ±2400mA	±12V / ±1250mA	±15V / ±1000mA	±5V / ±2500mA	±12V / ±1250mA	±15V / ±1000mA
Efficiency	85%	88%	88%	85%	88%	88%
Capacitor Load (max)	±820uF	±150uF	±120uF	±820uF	±150uF	±120uF

Model No. (Dual Output)	ST30-24-5D	ST30-48-5D	ST30-24-12D ST30-48-12D	ST30-24-15D ST30-48-15D	
Max Output Wattage (W)	24W	25W	30W	30W	
Input	Input Filter π type				
Output	Voltage (V.DC.)	±5	±12	±15	
	Voltage Accuracy	±2%			
	Current (mA) max	±2400	±2500	±1250	±1000
	Line Regulation (LL-HL) (typ.)	±0.5%			
	Load Regulation (10-100%) (typ.)	±1%			
	Ripple	5D:60mV / other: <0.2% Vout +40mV max (Vp-p)			
	Noise	5D:120mV / other: <0.5% Vout +50mV max (Vp-p)			
	Minimum Load	0.5%	0.5%	0.5%	0.5%
Protection	Switching Frequency	400KHz			
	Over Power Protection	Works over 120% of rating and recovers automatically.			
	Over Voltage Protection	Zener diode clamp			
Isolation	Short Circuit Protection	Current limit, auto-recovery			
	Voltage	1600 VDC.			
	Resistance	10 ⁸ ohms			
Environment	Capacitance	1000 pF			
	Operating Temperature	-40°C...+85°C (with derating)			
	Storage Temperature	-55°C...+105°C			
	Case Temperature	+105°C max.			
	Temperature Coefficient	±0.02% Per°C			
	Humidity	95% RH			
Physical	MTBF	>550,000 h @ 25°C (MIL-HDBK-217F)			
	Dimension (L x W x H)	2.0 x 1.0 x 0.433 Inches (50.8 x 25.4 x 11.0 mm) Tolerance ±0.5 mm			
	Case Material	Five-side shielded Aluminum with Non-Conductive base, Black Anodize			
	Weight	33 g			
	Cooling Method	Free-air convection			

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

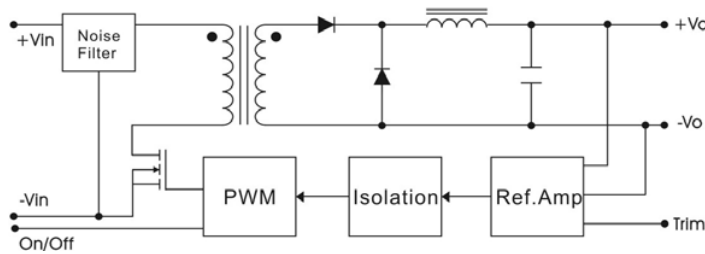
MECHANICAL DIMENSION (Top View)



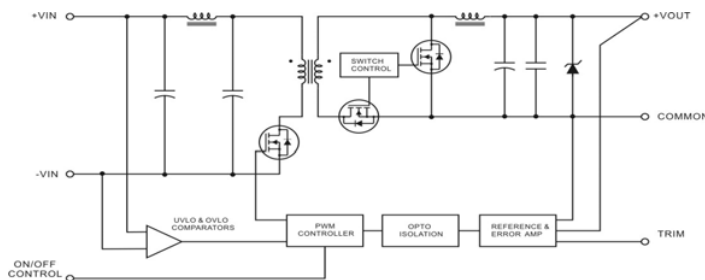
PIN#	Single	Dual	24Vout
1	CTRL	CTRL	CTRL
2	-DC IN	-DC IN	-DC IN
3	+DC IN	+DC IN	+DC IN
4	TRIM	-DC OUT	NC
5	-DC OUT	COMMON	-DC OUT
6	+DC OUT	+DC OUT	+DC OUT

BLOCK DIAGRAM

Single Output

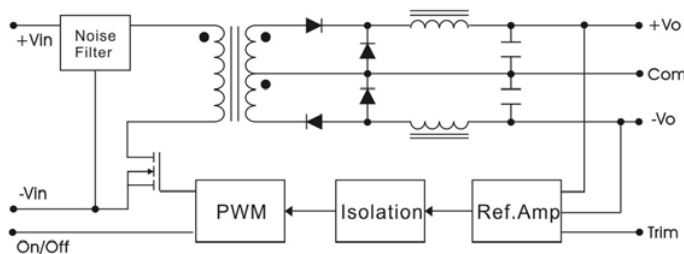


Output Voltage (V.DC) : 12V, 15V, 24V

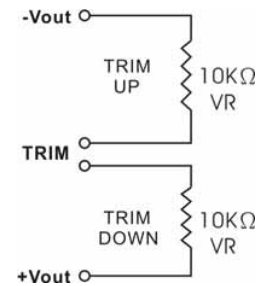


Output Voltage (V.DC) : 2.5V, 3.3V, 5V

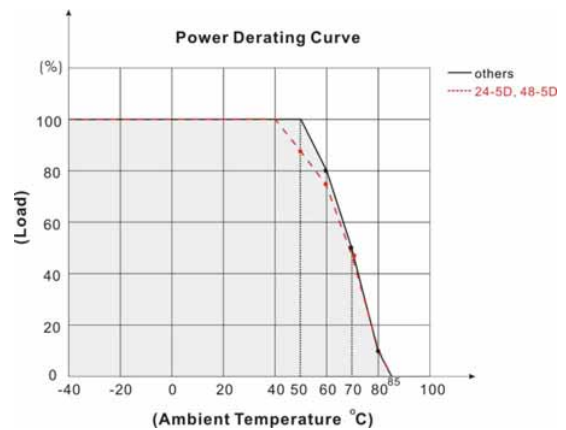
Dual Output



TRIM



DERATING



ST30 SERIES

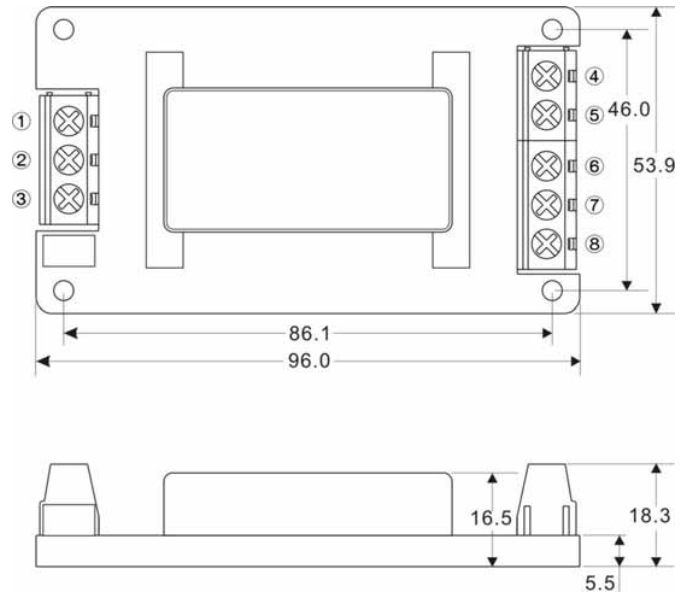
30 Watts

SCREW TERMINAL

ST30-A2



PIN#	Single	Dual	24Vout
1	CTRL	CTRL	CTRL
2	-DC IN	-DC IN	-DC IN
3	+DC IN	+DC IN	+DC IN
4	TRIM	-DC OUT	NO CONNECT
5	-DC OUT	COM	-DC OUT
6	NO CONNECT	NO CONNECT	NO CONNECT
7	+DC OUT	+DC OUT	+DC OUT
8	NO CONNECT	NO CONNECT	NO CONNECT



ST30-A5



PIN#	Single	Dual	24Vout
1	CTRL	CTRL	CTRL
2	-DC IN	-DC IN	-DC IN
3	+DC IN	+DC IN	+DC IN
4	TRIM	-DC OUT	NO CONNECT
5	-DC OUT	COM	-DC OUT
6	NO CONNECT	NO CONNECT	NO CONNECT
7	+DC OUT	+DC OUT	+DC OUT
8	NO CONNECT	NO CONNECT	NO CONNECT

