

**SF30 SERIES**
**30 Watts**
**KEY FEATURES**

- Power Module for PCB Mountable
- High Efficiency Up To 87%
- 4:1 Wide Input Range
- Six-sided Continuous Shield
- Standard Package
- Screw Terminal for Optional
- 3-Years Product Warranty


**ELECTRICAL SPECIFICATIONS**

Model No. ( Single Output )	SF30-24-2.5S	SF30-24-3.3S	SF30-24-5S	SF30-24-12S	SF30-24-15S	SF30-24-24S
Max. Output Wattage (W)	15W	19.8W	30W	30W	30W	30W
Input Voltage (V.DC.)	24V (10-40V)	24V (10-40V)	24V (10-40V)	24V (10-40V)	24V (10-40V)	24V (10-40V)
Output Voltage (V.DC.)	2.5V / 6000mA	3.3V / 6000mA	5V / 6000mA	12V / 2500mA	15V / 2000mA	24V / 1250mA
Efficiency (%)	76%	83%	83%	83%	80%	84%
capacitor Load max	60000 uF	27000 uF	6300 uF	470 uF	660 uF	240 uF

Model No. ( Single Output )	SF30-48-2.5S	SF30-48-3.3S	SF30-48-5S	SF30-48-12S	SF30-48-15S	SF30-48-24S
Max. Output Wattage (W)	15W	19.8W	30W	30W	30W	30W
Input Voltage (V.DC.)	48V (18-75V)	48V (18-75V)	48V (18-75V)	48V (18-75V)	48V (18-75V)	48V (18-75V)
Output Voltage (V.DC.)	2.5V / 6000mA	3.3V / 6000mA	5V / 6000mA	12V / 2500mA	15V / 2000mA	24V / 1250mA
Efficiency (%)	81%	85%	87%	86%	85%	86%
capacitor Load max	60000 uF	27000 uF	9000 uF	1800 uF	1000 uF	420 uF

Model No. ( Dual Output )	SF30-24-5D	SF30-24-12D	SF30-24-15D	SF30-48-5D	SF30-48-12D	SF30-48-15D
Max. Output Wattage (W)	30W	30W	30W	30W	30W	30W
Input Voltage (V.DC.)	24V (10-40V)	24V (10-40V)	24V (10-40V)	48V (18-75V)	48V (18-75V)	48V (18-75V)
Output Voltage (V.DC.)	±5V / ±3000mA	±12V / ±1250mA	±15V / ±1000mA	±5V / ±3000mA	±12V / ±1250mA	±15V / ±1000mA
Efficiency (%)	81%	84%	83%	84%	86%	85%
capacitor Load max	±1400 uF	±660 uF	±430 uF	±9500 uF	±760 uF	±450 uF

Model No. ( Single Output )	SF30-24-2.5S	SF30-24-3.3S	SF30-24-5S	SF30-24-12S	SF30-24-15S	SF30-24-24S	
Max Output Wattage (W)	15W	19.8W	30W	30W	30W	30W	
Output	Voltage (V.DC.)	2.5	3.3	5	12	15	24
	Voltage Accuracy	±2%					
	Current (mA) max	6000	6000	6000	2500	2000	1250
	Line Regulation (LL-HL) (typ.)	±0.5%					
	Load Regulation (10-100%) (typ.)	±1%					
	Ripple	100 mV max.			±1% max.		
	Noise	100 mV max.			±1% max.		
	Trim	±10%					
Protection	Switching Frequency	250KHz					
	Over Power Protection	Works over 120% of rating and recovers automatically.					
	Over Voltage Protection	Zener diode clamp					
Isolation	Short Circuit Protection	Hiccup mode, auto-recovery					
	Voltage	1600 VDC.					
	Resistance	10 <sup>8</sup> ohms					
Environment	Capacitance	1000 pF					
	Operating Temperature	-25°C...+70°C (with derating)					
	Storage Temperature	-55°C...+105°C					
	Case Temperature	+100°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 1.6 x 0.47 Inches ( 50.8 x 40.6 x 11.9 mm ) Tolerance ±0.5 mm					
	Case Material	Five-side shielded Aluminum with Non-Conductive base, Black Anodize					
	Weight	58 g					
	Cooling Method	Free-air convection					

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

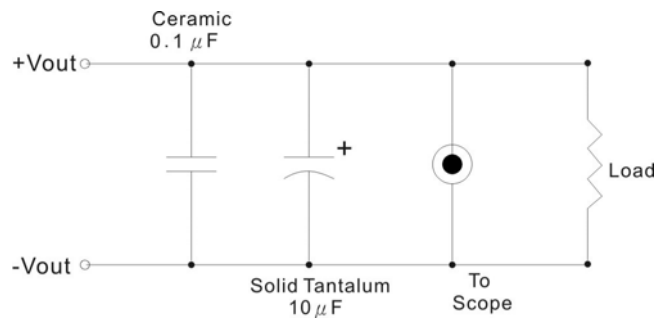
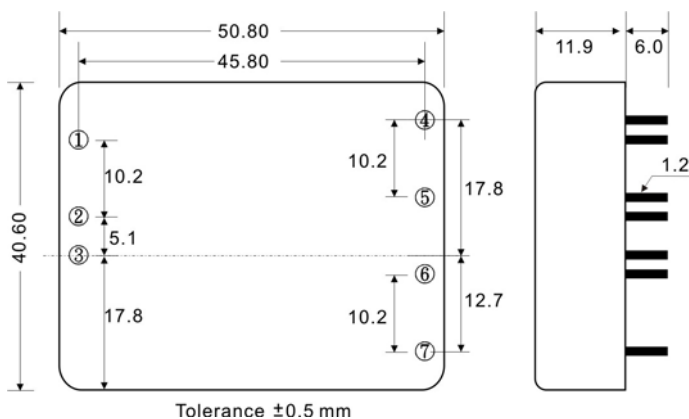
2.Ripple &amp; Noise are measured at 20MHz of bandwidth with 0.1uF &amp; 47uF parallel capacitor.

**SF30 SERIES**
**30 Watts**

Model No. (Dual Output)	SF30-24-5D SF30-48-5D	SF30-24-12D SF30-48-12D	SF30-24-15D SF30-48-15D
Max Output Wattage (W)	30W		
Input	Input Filter	$\pi$ type	
Output	Voltage (V.DC.)	$\pm 5$	$\pm 12$
	Voltage Accuracy	$\pm 2\%$	$\pm 15$
	Current (mA) max	$\pm 3000$	$\pm 1250$
	Line Regulation (LL-HL) (typ.)	$\pm 0.5\%$	
	Load Regulation (10-100%) (typ.)	$\pm 1\%$	
	Ripple	$\pm 1\%$	
	Noise	$\pm 1\%$	
	Trim	$\pm 10\%$	
Protection	Over Power Protection	Works over 120% of rating and recovers automatically.	
	Over Voltage Protection	Zener diode clamp	
	Short Circuit Protection	Hiccup mode, auto-recovery	
Isolation	Voltage	1600 VDC.	
	Resistance	$10^8$ ohms	
	Capacitance	1000 pF	
Environment	Operating Temperature	-25°C...+70°C (with derating)	
	Storage Temperature	-55°C...+105°C	
	Case Temperature	+100°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 1.6 x 0.47 Inches ( 50.8 x 40.6 x 11.9 mm ) Tolerance $\pm 0.5$ mm	
	Case Material	Five-side shielded Aluminum with Non-Conductive base, Black Anodize	
	Weight	58 g	
	Cooling Method	Free-air convection	

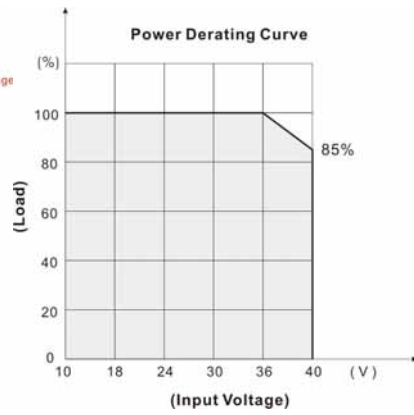
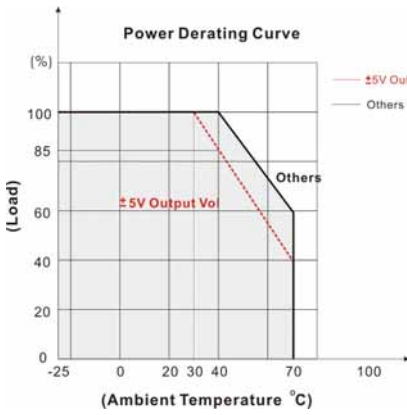
- 1.All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.
- 2.Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

**OUTPUT NOISE**

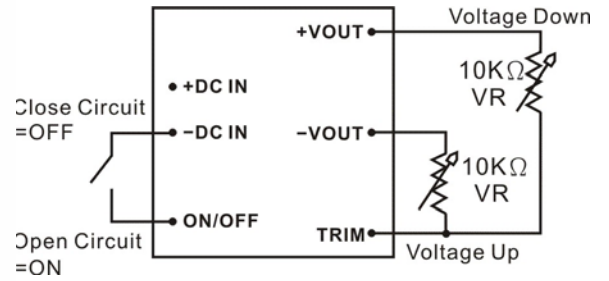
 The output noise is measured with 10 $\mu$ F tantalum capacitor and 0.1 $\mu$ F ceramic capacitor across output.

**MECHANICAL DIMENSION ( Top View )**


PIN#	Single	Dual
1	CTRL	CTRL
2	-DC IN	-DC IN
3	+DC IN	+DC IN
4	TRIM	TRIM
5	-DC OUT	-DC OUT
6	+DC OUT	COMMON
7	NO PIN	+DC OUT

**DERATING**



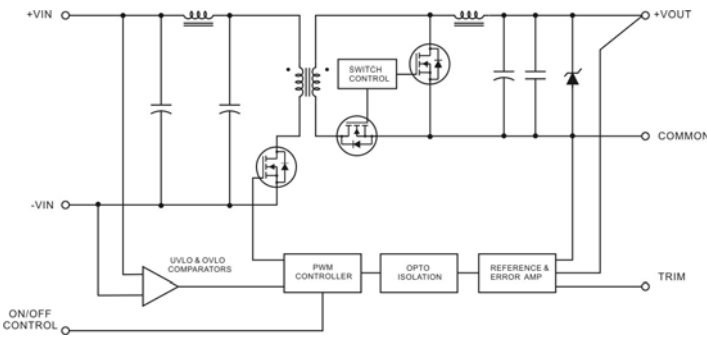
**REMOTE ON/OFF CONTROL & TRIM**



**BLOCK DIAGRAM**

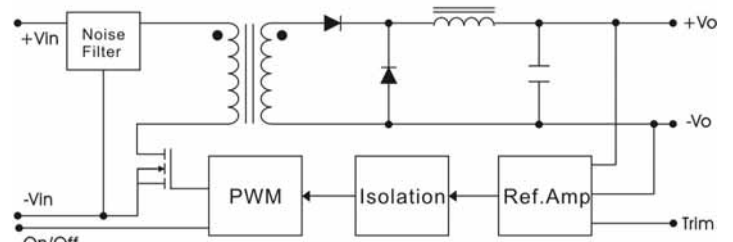
**Single Output**

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

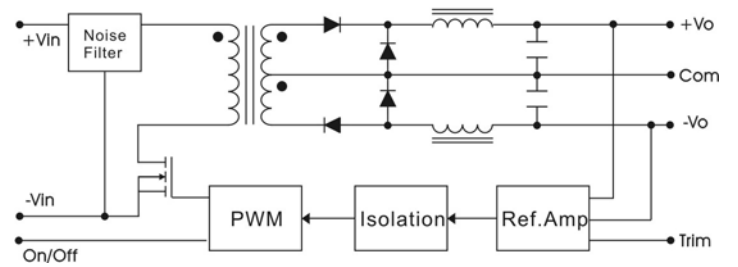


**Single Output**

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

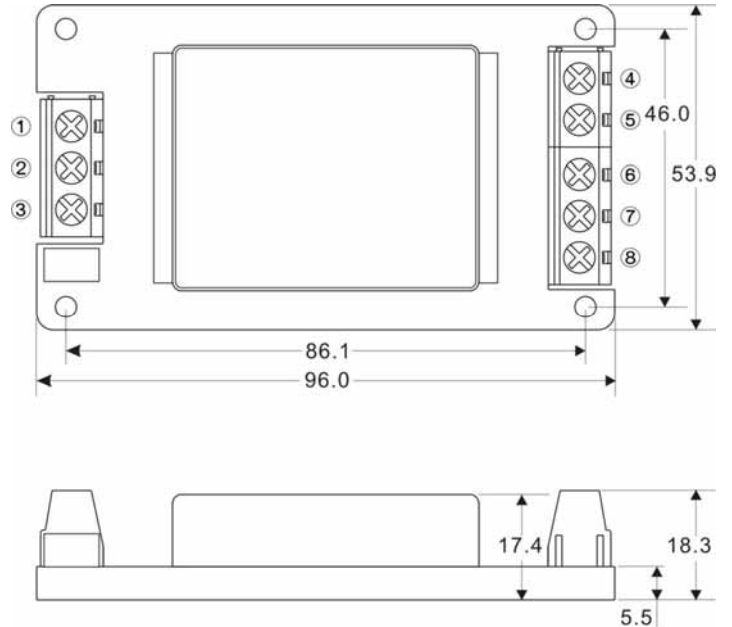


**Dual Output**



**SCREW TERMINAL**
**SF30-A2**


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


**SF30-A5**


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

