

## KEY FEATURES

- Power Module for PCB Mountable
- 2:1 Input Range
- Synchronous Rectifier Topology
- Regulated Output
- Low Ripple and Noise
- Screw Terminal For Optional
- Remote ON/OFF Control (Optional)
- Standard 2" x 1" Package and Pinout
- CE, UL Approval
- 3-Years Product Warranty



## ELECTRICAL SPECIFICATIONS

Model No.	ST20-24-2.5S	ST20-24-3.3S	ST20-24-5S
Max. Output Wattage (W)	12.5W	14W	20W
Input Voltage (V.DC.)	24V (18-36V)	24V (18-36V)	24V (18-36V)
Output Voltage (V.DC.)	2.5V / 4000mA	3.3V / 4000mA	5V / 4000mA
Efficiency	83%	86%	87%

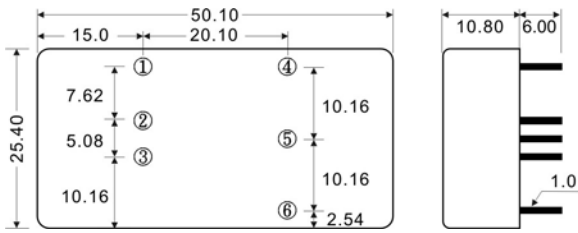
Model No.	ST20-48-2.5S	ST20-48-3.3S	ST20-48-5S
Max. Output Wattage (W)	12.5W	14W	20W
Input Voltage (V.DC.)	48V (36-75V)	48V (36-75V)	48V (36-75V)
Output Voltage (V.DC.)	2.5V / 4000mA	3.3V / 4000mA	5V / 4000mA
Efficiency	83%	86%	87%

Model No.	ST20-24-2.5S	ST20-24-3.3S	ST20-24-5S	ST20-48-2.5S	ST20-48-3.3S	ST20-48-5S	
Max Output Wattage (W)	12.5W	14W	20W	12.5W	14W	20W	
Input	Input Filter $\pi$ type						
Output	Voltage (V.DC.)	2.5	3.3	5	2.5	3.3	5
	Voltage Accuracy	$\pm 2\%$					
	Current (mA) max	4000	4000	4000	4000	4000	4000
	Line Regulation (LL-HL) (typ.)	$\pm 0.5\%$					
	Load Regulation (10-100%) (typ.)	$\pm 1\%$					
	Ripple	110mV max (Vp-p)					
	Noise	200mV max (Vp-p)					
	Efficiency	83%	86%	87%	83%	86%	87%
Protection	Switching Frequency	400KHz					
	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	Transient Response	$\leq 500$ us (100% to 50% full load at $\pm 1\%$ error band)					
	Voltage	1600 VDC.					
	Resistance	$10^8$ ohms					
Environment	Capacitance	1000 pF					
	Operating Temperature	$-25^{\circ}\text{C} \dots +70^{\circ}\text{C}$ (with derating)					
	Storage Temperature	$-55^{\circ}\text{C} \dots +105^{\circ}\text{C}$					
	Case Temperature	$+100^{\circ}\text{C}$ max.					
	Temperature Coefficient	$\pm 0.02\%$ Per $^{\circ}\text{C}$					
	Humidity	95% RH					
Physical	MTBF	$>550,000$ h @ $25^{\circ}\text{C}$ (MIL-HDBK-217F)					
	Dimension (L x W x H)	1.97 x 1.0 x 0.425 Inches ( 50.1 x 25.4 x 10.8 mm ) Tolerance $\pm 0.5$ mm					
	Case Material	Six-side shielded Aluminum with Non-Conductive base, Black Anodize					
	Weight	32 g					
Safety	Cooling Method	Free-air convection					
	Agency Approvals	CE, UL					
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class A					

1.All specifications valid at normal input voltage, full load and  $+25^{\circ}\text{C}$  after warm-up time unless otherwise stated.

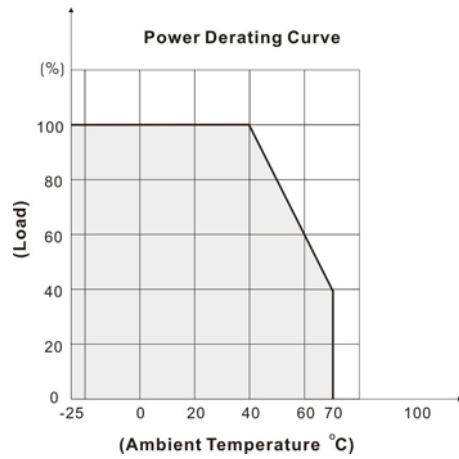
2.Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

**MECHANICAL DIMENSION ( Top View )**

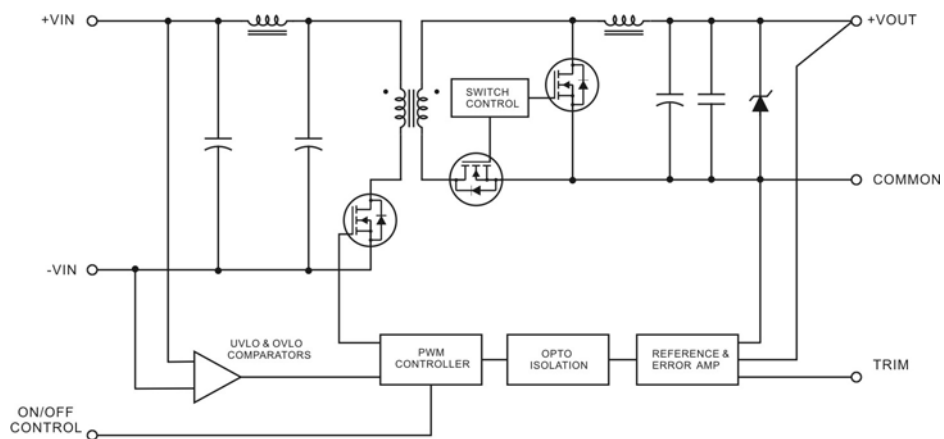


PIN#	Single
1	ON / OFF CTL (Optional)
2	-DC IN
3	+DC IN
4	-DC OUT
5	NO PIN
6	+DC OUT

**DERATING**

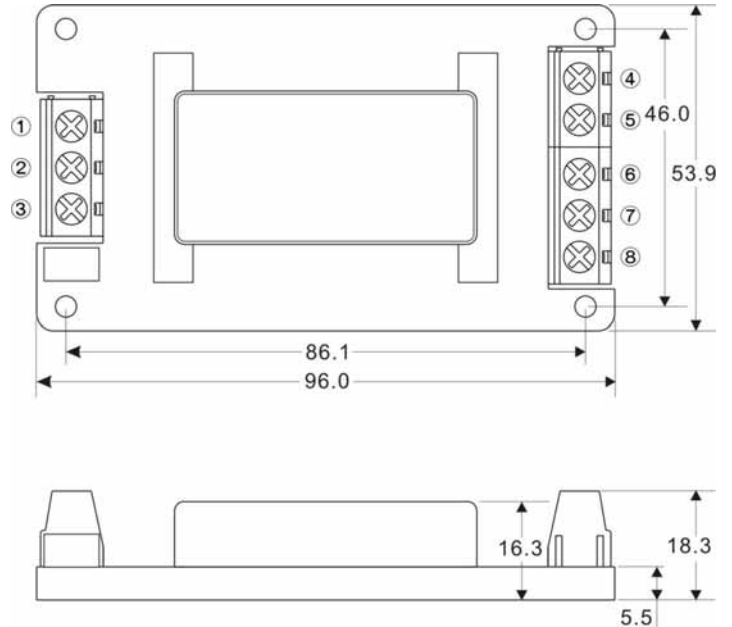


**BLOCK DIAGRAM**



**ST20 SERIES**
**20 Watts**
**SCREW TERMINAL**
**ST20-A2**


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


**ST20-A5**


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

