

KEY FEATURES

- Power Modules for PCB Mounting
- Regulated Output
- Low Ripple and Noise
- Optional Vout trim and ON/OFF Control.
- 2-Year Product Warranty


ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	SU20-12-3.3S	SU20-12-5S	SU20-12-12S	SU20-12-15S	SU20-12-24S
Max. output wattage (W)	13.2W	20W	20W	20W	20W
Input voltage (V.DC.)	12V (9-18V)	12V (9-18V)	12V (9-18V)	12V (9-18V)	12V (9-18V)
Output voltage (V.DC.)	3.3V / 4000mA	5V / 4000mA	12V / 1670mA	15V / 1330mA	24V / 833mA

Model No. (Single Output)	SU20-24-3.3S	SU20-24-5S	SU20-24-12S	SU20-24-15S	SU20-24-24S
Max. output wattage (W)	13.2W	20W	20W	20W	20W
Input voltage (V.DC.)	24V (18-36V)	24V (18-36V)	24V (18-36V)	24V (18-36V)	24V (18-36V)
Output voltage (V.DC.)	3.3V / 4000mA	5V / 4000mA	12V / 1670mA	15V / 1330mA	24V / 833mA

Model No. (Single Output)	SU20-48-3.3S	SU20-48-5S	SU20-48-12S	SU20-48-15S	SU20-48-24S
Max. output wattage (W)	13.2W	20W	20W	20W	20W
Input voltage (V.DC.)	48V (36-75V)	48V (36-75V)	48V (36-75V)	48V (36-75V)	48V (36-75V)
Output voltage (V.DC.)	3.3V / 4000mA	5V / 4000mA	12V / 1670mA	15V / 1330mA	24V / 833mA

Model No. (Single Output)	SU20-12-3.3S	SU20-12-5S	SU20-12-12S	SU20-12-15S	SU20-12-24S	
	SU20-24-3.3S	SU20-24-5S	SU20-24-12S	SU20-24-15S	SU20-24-24S	
	SU20-48-3.3S	SU20-48-5S	SU20-48-12S	SU20-48-15S	SU20-48-24S	
Max output wattage (W)	13.2W	20W	20W	20W	20W	
Input	Input filter π type					
Output	Voltage (V.DC.)	3.3	5	12	15	24
	Voltage accuracy	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$
	Current (mA) max	4000	4000	1670	1330	833
	Line regulation (HL-LL) (typ.)	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
	Load regulation (10-100%) (typ.)	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
	Ripple	$< 0.2\% V_{out} + 20mV$ max (Vp-p)				
	Noise	$< 0.5\% V_{out} + 50mV$ max (Vp-p)				
	Efficiency	77%	80%	82%	82%	82%
Protection	Switching frequency	200KHz	200KHz	200KHz	200KHz	200KHz
	Over current protection	Works over 120% of rating and recovers automatically.				
	Over voltage protection	Zener diode clamp				
Isolation	Short circuit protection	Hiccup, auto-recovery				
	Voltage	1600 VDC.				
	Resistance	10^9 ohms				
Environment	Capacitance	1000 pF				
	Operating temperature	$-25^{\circ}C \dots +71^{\circ}C$				
	Storage temperature	$-55^{\circ}C \dots +105^{\circ}C$				
	Case temperature	$+95^{\circ}C$ max.				
	Temperature coefficient	$\pm 0.02\%$ Per $^{\circ}C$				
	Humidity	95% RH				
Physical	MTBF	$> 550,000$ h @ $25^{\circ}C$ (MIL-HDBK-217F)				
	Dimension (L x W x H)	2.0 x 2.0 x 0.42 Inches (50.8 x 50.8x 10.8 mm)				
	Case Material	Nickel-Coated Copper with Non-Conductive base, six-side shielded.				
	Weight	50 g				
Safety	Cooling method	Free-air convection				
	Agency approvals	CE (Pending)				
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class A				

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

ELECTRICAL SPECIFICATIONS

Model No. (Dual, Triple Output)	SU20-12-5D	SU20-12-12D	SU20-12-15D	SU20-12-5S12D	SU20-12-5S15D
Max. output wattage (W)	20W	20W	20W	20W	20W
Input voltage (V.DC.)	12V (9-18V)	12V (9-18V)	12V (9-18V)	12V (9-18V)	12V (9-18V)
Output voltage (V.DC.)	±5V / ±2000mA	±12V / ±833mA	±15V / ±660mA	5/±12V / 2500/±300mA	5/±15V / 2500/±250mA

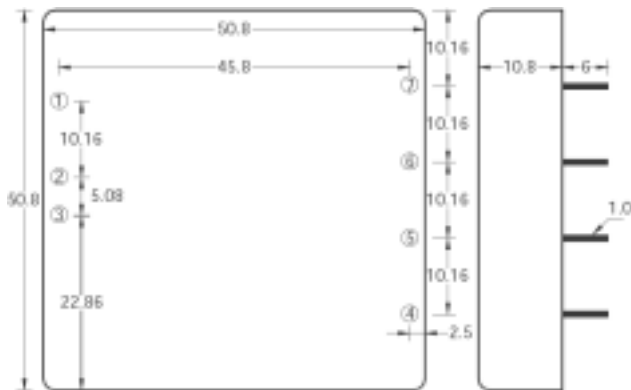
Model No. (Dual, Triple Output)	SU20-24-5D	SU20-24-12D	SU20-24-15D	SU20-24-5S12D	SU20-24-5S15D
Max. output wattage (W)	20W	20W	20W	20W	20W
Input voltage (V.DC.)	24V (18-36V)	24V (18-36V)	24V (18-36V)	24V (18-36V)	24V (18-36V)
Output voltage (V.DC.)	±5V / ±2000mA	±12V / ±833mA	±15V / ±660mA	5/±12V / 2500/±300mA	5/±15V / 2500/±250mA

Model No. (Dual, Triple Output)	SU20-48-3.3S	SU20-48-5S	SU20-48-12S	SU20-48-15S	SU20-48-24S
Max. output wattage (W)	20W	20W	20W	20W	20W
Input voltage (V.DC.)	48V (36-75V)	48V (36-75V)	48V (36-75V)	48V (36-75V)	48V (36-75V)
Output voltage (V.DC.)	±5V / ±2000mA	±12V / ±833mA	±15V / ±660mA	5/±12V / 2500/±300mA	5/±15V / 2500/±250mA

Model No. (Dual, Triple Output)	SU20-12-5D SU20-24-5D SU20-48-5D	SU20-12-12D SU20-24-12D SU20-48-12D	SU20-12-15D SU20-24-15D SU20-48-15D	SU20-12-5S12D SU20-24-5S12D SU20-48-5S12D	SU20-12-5D15D SU20-24-5S15D SU20-48-5S15D	
Max output wattage (W)	20W	20W	20W	20W	20W	
Input	Input filter π type					
Output	Voltage (V.DC.)	±5	±12	±15	5/±12	5/±15
	Voltage accuracy	±2%	±2%	±2%	±2%	±2%
	Current (mA) max	±2000	±833	±660	2500/ ±300	2500 / ±250
	Line regulation (HL-LL) (typ.)	±0.5%	±0.5%	±0.5%	±0.5% / ±5%	±0.5% / ±5%
	Load regulation (10-100%) (typ.)	±3%	±3%	±3%	±3% / ±5%	±3% / ±5%
	Ripple	<0.2% Vout +20mV max (Vp-p)				
	Noise	<0.5% Vout +50mV max (Vp-p)				
	Efficiency	79%	81%	82%	78%	78%
Switching frequency	200KHz	200KHz	200KHz	200KHz	200KHz	
Protection	Over current protection	Works over 120% of rating and recovers automatically.				
	Over voltage protection	Zener diode clamp				
	Short circuit protection	Hiccup, auto-recovery				
Isolation	Input-Output (V.DC)	1600 VDC.				
	Resistance	10 ⁹ ohms				
	Capacitance	1000 pF				
Environment	Operating temperature	-25°C...+71°C				
	Storage temperature	-55°C...+105°C				
	Case temperature	+95°C max.				
	Temperature coefficient	±0.02% Per°C				
	Humidity	95% RH				
MTBF	>550,000 h @ 25°C (MIL-HDBK-217E)					
Physical	Dimension (L x W x H)	2.0 x 2.0 x 0.42 Inches (50.8 x 50.8x 10.8 mm)				
	Case Material	Nickel-Coated Copper with Non-Conductive base, six-side shielded.				
	Weight	50 g				
	Cooling method	Free-air convection				
Safety	Agency approvals	CE (Pending)				
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class A				

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

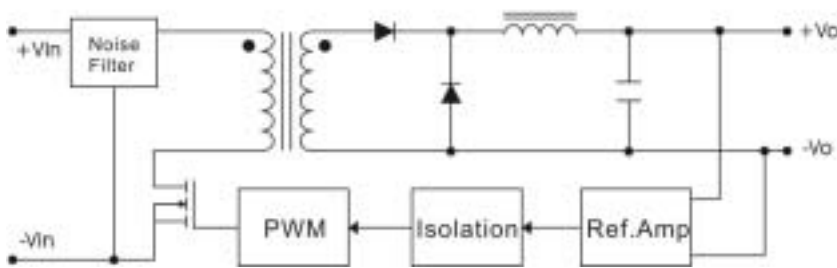
MECHANICAL DIMENSION (Top View)



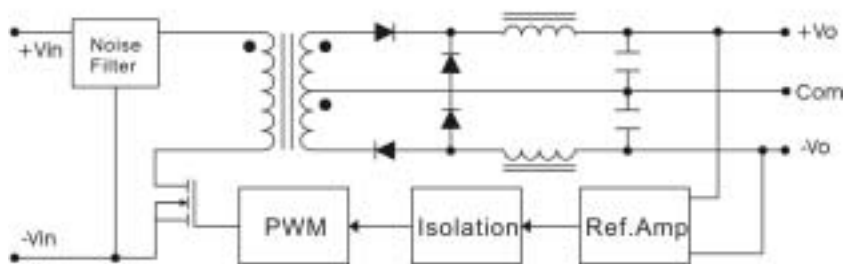
PIN#	Single	Dual	Triple
1	ON / OFF	ON / OFF	ON / OFF
2	-VIN	-VIN	-VIN
3	+VIN	+VIN	+VIN
4	NC	+VOUT	+VOUT
5	+VOUT	COMMON	+5VOUT
6	-VOUT	-VOUT	COMMON
7	TRIM	TRIM	-VOUT

BLOCK DIAGRAM

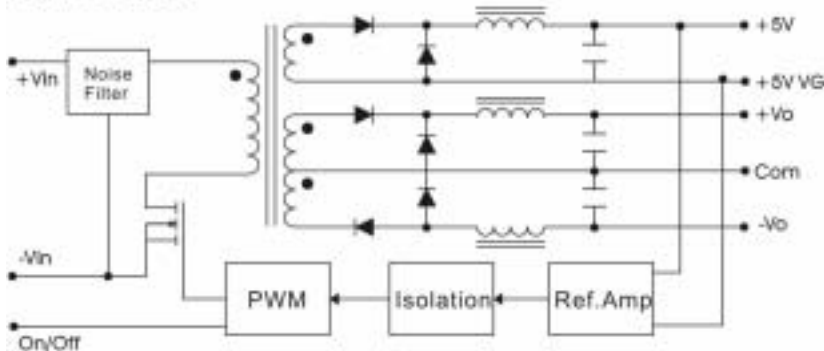
Single Output



Dual Output



Triple Output



DERATING

