

SH05 SERIES

5 Watts

KEY FEATURES

- Power Module for PCB Mountable
- High Efficiency and Reliability
- 4:1 Wide Input Range
- Single and Dual Output
- Regulated Output
- Low Ripple and Noise
- 2-Years Product Warranty



ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	SH05-24F-3.3S	SH05-24F-5S	SH05-24F-12S	SH05-24F-15S	SH05-24F-24S
Max Output Wattage (W)	4W	5W	6W	6W	6W
Input Voltage (V.DC.)	12V (9-36V)	12V (9-36V)	12V (9-36V)	12V (9-36V)	12V (9-36V)
Output Voltage (V.DC.)	3.3V/1200mA	5V/1000mA	12V/500mA	15V/400mA	24V/250mA
Efficiency (typ.)	78%	81%	84%	82%	82%
Capacitor Load (max)	2200μF	1000μF	680μF	560μF	330μF

Model No. (Single Output)	SH05-48F-3.3S	SH05-48F-5S	SH05-48F-12S	SH05-48F-15S	SH05-48F-24S
Max Output Wattage (W)	4W	5W	6W	6W	6W
Input Voltage (V.DC.)	24V (18-75V)	24V (18-75V)	24V (18-75V)	24V (18-75V)	24V (18-75V)
Output Voltage (V.DC.)	3.3V/1200mA	5V/1000mA	12V/500mA	15V/400mA	24V/250mA
Efficiency (typ.)	78%	81%	84%	83%	83%
Capacitor Load (max)	2200μF	1000μF	680μF	560μF	330μF

Model No. (Single Output)	SH05-24F-3.3S	SH05-24F-5S	SH05-24F-12S	SH05-24F-15S	SH05-24F-24S
Max Output Wattage (W)	4W	5W	6W	6W	6W
Input	Input Filter	π type			
	Voltage (V.DC.)	3.3	5	12	15
	Voltage Accuracy	±2%			
	Current (mA) max	1200	1000	500	400
	Line Regulation (LL-HL) (typ.)	±0.5%			
	Load Regulation (10-100%) (typ.)	±3%	±1%	±1%	±1%
	Minimum Load	0%			
	Ripple	<0.2% Vout +40mV max (Vp-p)			
	Noise	<0.5% Vout +50mV max (Vp-p)			
	Switching Frequency	300KHz			
Protection	Over Power Protection	Above 105% Rated Output Power			
	Short Circuit Protection	Current limit, auto-recovery			
Isolation	Voltage	1600 VDC.			
	Resistance	10 ⁸ ohms			
	Capacitance	1000 pF			
Environment	Operating Temperature	-25°C...+60°C (at Full Load)			
	Storage Temperature	-55°C...+105°C			
	Case Temperature	+100°C max.			
	Temperature Coefficient	±0.02% Per°C			
	Humidity	95% RH			
	MTBF	>800,000 h @ 25°C (MIL-HDBK-217F)			
Physical	Dimension (L x W x H)	1.25 x 0.8 x 0.44 Inches (31.8 x 20.3 x 11.2 mm) Tolerance ±0.5 mm			
	Case Material	Nickel-Coated Copper with Non-Conductive Base, Six-side shielded.			
	Weight	20 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.

SH05 SERIES

5 Watts

Model No. (Dual Output)	SH05-24F-5D	SH05-24F-12D	SH05-24F-15D
Max Output Wattage (W)	5W	6W	6W
Input Voltage (V.DC.)	12V (9-36V)	12V (9-36V)	12V (9-36V)
Output Voltage (V.DC.)	±5V / ±500mA	±12 / ±250mA	±15 / ±200mA
Efficiency (typ.)	81%	83%	83%
Capacitor Load (max)	1000μF	220μF	100μF

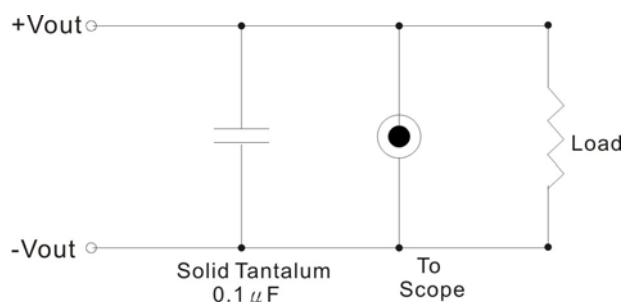
Model No. (Dual Output)	SH05-48F-5D	SH05-48F-12D	SH05-48F-15D
Max Output Wattage (W)	5W	6W	6W
Input Voltage (V.DC.)	24V (18-75V)	24V (18-75V)	24V (18-75V)
Output Voltage (V.DC.)	±5V / ±500mA	±12 / ±250mA	±15 / ±200mA
Efficiency (typ.)	81%	84%	83%
Capacitor Load (max)	1000μF	220μF	100μF

Model No. (Dual Output)	SH05-24F-5D	SH05-24F-12D	SH05-24F-15D
	SH05-48F-5D	SH05-48F-12D	SH05-48F-15D
Max Output Wattage (W)	5W	6W	6W
Input	Input Filter	π type	
Output	Voltage (V.DC.)	±5	±12
	Voltage Accuracy	±2%	
	Current (mA) max	±500	±250
	Line Regulation (LL-HL) (typ.)	±0.5%	
	Load Regulation (10-100%) (typ.)	±1%	±1%
	Minimum Load	0%	
	Ripple	<0.2% Vout +40mV max (Vp-p)	
	Noise	<0.5% Vout +50mV max (Vp-p)	
	Switching Frequency	300KHz	
Protection	Over Power Protection	Works over 120% of rating and recovers automatically.	
	Short Circuit Protection	Current limit, auto-recovery	
Isolation	Voltage	1600 VDC.	
	Resistance	10 ⁸ ohms	
	Capacitance	1000 pF	
Environment	Operating Temperature	-25°C...+60°C (at Full Load)	
	Storage Temperature	-55°C...+105°C	
	Case Temperature	+100°C max.	
	Temperature Coefficient	±0.02% Per°C	
	Humidity	95% RH	
Physical	MTBF	>800,000 h @ 25°C (MIL-HDBK-217F)	
	Dimension (L x W x H)	1.25 x 0.8 x 0.44 Inches (31.8 x 20.3 x 11.2 mm) Tolerance ±0.5 mm	
	Case Material	Nickel-Coated Copper with Non-Conductive Base, Six-side shielded.	
	Weight	20 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.

OUTPUT NOISE

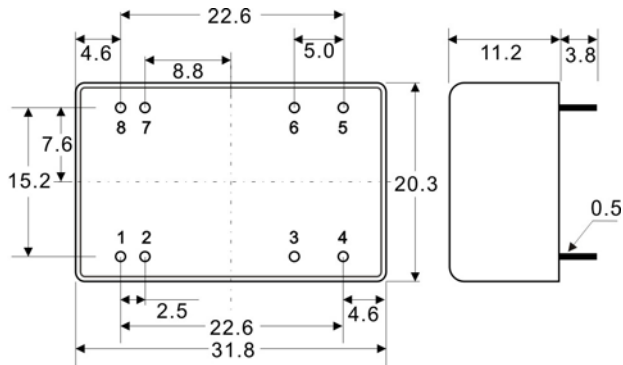
The output noise is measured with 0.1μF tantalum capacitor



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MECHANICAL DIMENSION (Top View)

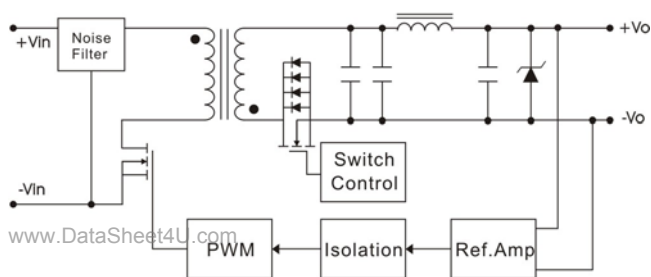


Tolerance ± 0.5 mm

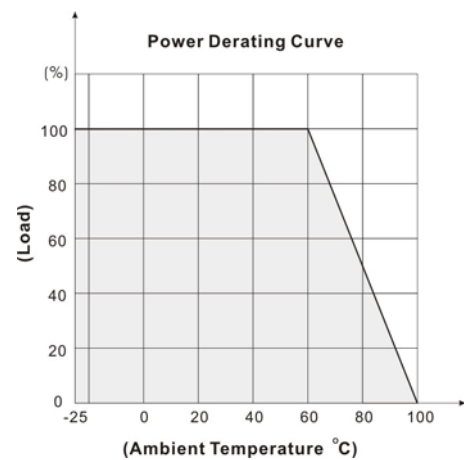
PIN#	Single	Dual
1	-VIN	-VIN
2	-VIN	-VIN
3	NO PIN	COMMON
4	NC	-VOUT
5	+VOUT	+VOUT
6	-VOUT	COMMON
7	+VIN	+VIN
8	+VIN	+VIN

BLOCK DIAGRAM

Single Output



DERATING



Dual Outputs

