

SB08 Series

8 W DC/DC Converters

CoolPower
Solutions

- Power Module for PCB Mountable
- 2:1 & 4:1 Wide Input Range
- Regulated Output
- Low Ripple and Noise
- 2-Years Product Warranty



Electrical specifications

Model No. (Single Output)	SB08-12-3.3S	SB08-12-5S	SB08-12-12S	SB08-12-15S	SB08-12-24S
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/2000mA	5V/1500mA	12V/666mA	15V/533mA	24V/333mA
Efficiency	67%	69%	76%	75%	68%
Minimum Load	4%	3%	5%	5%	4%
Model No. (Single Output)	SB08-24-3.3S	SB08-24-5S	SB08-24-12S	SB08-24-15S	SB08-24-24S
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/2000mA	5V/1500mA	12V/666mA	15V/533mA	24V/333mA
Efficiency	72%	73%	80%	80%	77%
Minimum Load	3%	3%	4%	4%	4%
Model No. (Single Output)	SB08-24F-3.3S	SB08-24F-5S	SB08-24F-12S	SB08-24F-15S	SB08-24F-24S
Input Voltage (V.DC.)	24V (9-36V)	24V (9-36V)	24V (9-36V)	24V (9-36V)	24V (9-36V)
Output Voltage (V.DC.)	3.3V/2000mA	5V/1500mA	12V/666mA	15V/533mA	24V/333mA
Efficiency	70%	66%	72%	71%	73%
Minimum Load		4%	5%	5%	
Model No. (Single Output)	SB08-48-3.3S	SB08-48-5S	SB08-48-12S	SB08-48-15S	SB08-48-24S
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/2000mA	5V/1500mA	12V/666mA	15V/533mA	24V/333mA
Efficiency	73%	74%	80%	80%	79%
Minimum Load	3%	3%	4%	4%	4%
Model No. (Single Output)	SB08-48F-3.3S	SB08-48F-5S	SB08-48F-12S	SB08-48F-15S	SB08-48F-24S
Input Voltage (V.DC.)	48V (18-75V)	48V (18-75V)	48V (18-75V)	48V (18-75V)	48V (18-75V)
Output Voltage (V.DC.)	3.3V/2000mA	5V/1500mA	12V/666mA	15V/533mA	24V/333mA
Efficiency	70%	73%	78%	78%	73%
Model No. (Dual Output)	SB08-12-5D		SB08-12-12D	SB08-12-15D	
Input Voltage (V.DC.)	12V (9-18V)		12V (9-18V)	12V (9-18V)	
Output Voltage (V.DC.)	±5V / ±800mA		±12 / ±333mA	±15 / ±267mA	
Efficiency	70%		75%	74%	
Minimum Load	4%		5%	5%	
Model No. (Dual Output)	SB08-24-5D		SB08-24-12D	SB08-24-15D	
Input Voltage (V.DC.)	24V (18-36V)		24V (18-36V)	24V (18-36V)	
Output Voltage (V.DC.)	±5V / ±800mA		±12 / ±333mA	±15 / ±267mA	
Efficiency	73%		78%	74%	
Minimum Load	2%		5%	6%	
Model No. (Dual Output)	SB08-24F-5D		SB08-24F-12D	SB08-24F-15D	
Input Voltage (V.DC.)	24V (9-36V)		24V (9-36V)	24V (9-36V)	
Output Voltage (V.DC.)	±5V / ±800mA		±12 / ±333mA	±15 / ±267mA	
Efficiency	72%		76%	74%	
Model No. (Dual Output)	SB08-48-5D		SB08-48-12D	SB08-48-15D	
Input Voltage (V.DC.)	48V (36-75V)		48V (36-75V)	48V (36-75V)	
Output Voltage (V.DC.)	±5V / ±800mA		±12 / ±333mA	±15 / ±267mA	
Efficiency	73%		77%	74%	
Minimum Load	4%		5%	3%	

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Model No. (Dual Output)	SB08-48F-5D	SB08-48F-12D	SB08-48F-15D
Input Voltage (V.DC.)	48V (18-75V)	48V (18-75V)	48V (18-75V)
Output Voltage (V.DC.)	±5V / ±800mA	±12 / ±333mA	±15 / ±267mA
Efficiency	74%	77%	74%

Model No. (Single Output)		SB08-12-3.3S	SB08-12-5S	SB08-12-12S	SB08-12-15S	SB08-12-24S
		SB08-24--3.3S	SB08-24--5S	SB08-24--12S	SB08-24--15S	SB08-24--24S
		SB08-24F-3.3S	SB08-24F-5S	SB08-24F-12S	SB08-24F-15S	SB08-24F-24S
		SB08-48-3.3S	SB08-48-5S	SB08-48-12S	SB08-48-15S	SB08-48-24S
		SB08-48F-3.3S	SB08-48F-5S	SB08-48F-12S	SB08-48F-15S	SB08-48F-24S
Max Output Wattage (W)		6.6W	7.5W	8W	8W	8W
Input	Input Filter	L-C type				
Output	Voltage (V.DC.)	3.3	5	12	15	24
	Voltage Accuracy	±2%				
	Current (mA) max	2000	1500	666	533	333
	Line Regulation (LL-HL) (typ.)	±0.5%				
	Load Regul. (10-100%) (typ.)	±3%	±1%	±1%	±1%	±1%
	Ripple	<0.2% Vout +20mV 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	108 ohms				
	Capacitance	1000 pF				
Environment	Operating Temperature	-40°C...+80°C (with derating)				
	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 0.4 Inches (31.8 x 20.3 x 10.2 mm) Tolerance ±0.5 mm				
	Case Material	Six-side shielded Aluminum with Non-Conductive base, Black Anodize				
	Weight	13 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.

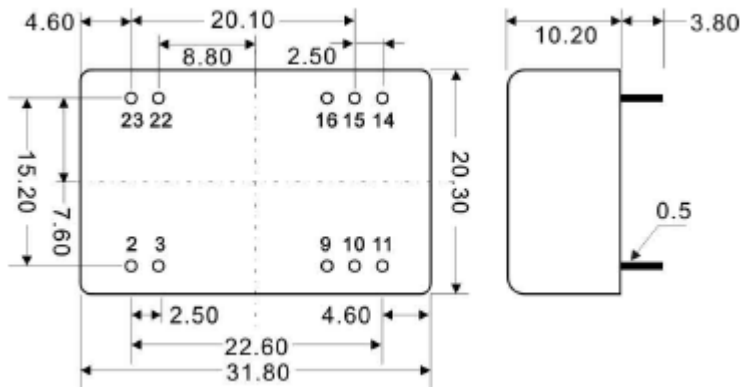
Model No. (Dual Output)		SB08-12-5D	SB08-12-12D	SB08-12-15D
		SB08-24--5D	SB08-24--12D	SB08-24--15D
		SB08-24F-5D	SB08-24F-12D	SB08-24F-15D
		SB08-48-5D	SB08-48-12D	SB08-48-15D
		SB08-48F-5D	SB08-48F-12D	SB08-48F-15D
Max Output Wattage (W)		8W	8W	8W
Input	Input Filter	L-C type		
Output	Voltage (V.DC.)	±5	±12	±15
	Voltage Accuracy	±2%		
	Current (mA) max	±800	±333	±267
	Line Regulation (LL-HL) (typ.)	±0.5%		
	Load Regulation (10-100%) (ty	±1%	±1%	±1%
	Ripple	<0.2% Vout +20mV 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	108 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	±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 0.4 Inches (31.8 x 20.3 x 10.2 mm) Tolerance ±0.5 mm		
	Case Material	Six-side shielded Aluminum with Non-Conductive base, Black Anodize		
	Weight	13 g		
	Cooling Method	Free-air convection		

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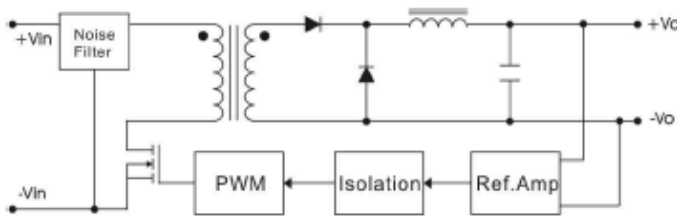
Mechanical Specifications (top view)



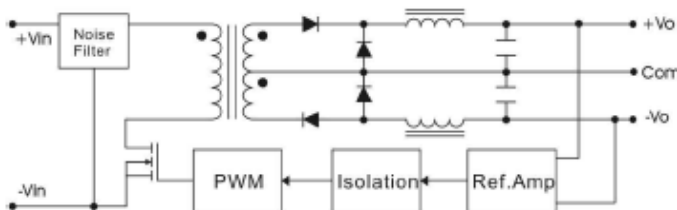
Pin no:	Single	Dual
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Common
10	NC	NC
11	NC	-Vout
14	+Vout	+Vout
15	NC	NC
16	-Vout	Common
22	+Vin	+Vin
23	+Vin	+Vin

Block Diagram

Single Output



Dual Output



Derating

