



Astrodyne

Isolated and Regulated 5 WATT Modular DC/DC Converters

SB05 series



- 6 Sided EMI Shielding
- Regulated Outputs
- 1600V Isolation
- Short Circuit Protection
- 4:1 Input Range
- Input PI Filter

Unit measures 0.8"W x 1.25"L x 0.4"H

Model Number	Output Voltage	Output Amps	Input Range	Efficiency
SINGLE OUTPUT				
SB05-243.3S	3.3VDC	1.2	9-36 VDC	71%
SB05-483.3S		1.2	18-75 VDC	71%
SB05-245S	5 VDC	1	9-36 VDC	75%
SB05-485S		1	18-75 VDC	75%
SB05-2412S	12 VDC	0.5	9-36 VDC	82%
SB05-4812S		0.5	18-75 VDC	82%
SB05-2415S	15 VDC	0.4	9-36 VDC	79%
SB05-4815S		0.4	18-75 VDC	82%
SB05-2424S	24VDC	0.25	9-36 VDC	81%
SB05-4824S		0.25	18-75 VDC	81%
DUAL OUTPUT				
SB05-245D	±5 VDC	±0.5	9-36 VDC	75%
SB05-485D		±0.5	18-75 VDC	77%
SB05-2412D	±12 VDC	±0.25	9-36 VDC	78%
SB05-4812D		±0.25	18-75 VDC	83%
SB05-2415D	±15 VDC	±0.2	9-36 VDC	75%
SB05-4815D		±0.2	18-75 VDC	81%



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INPUT SPECIFICATIONS

Input Voltage Ranges:	24 VDC Nominal	9-36 VDC
	48 VDC Nominal	18-75 VDC

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart	
Load Regulation	10% to FL	3.3V: $\pm 3\%$ All Other O/P: $\pm 1\%$
Line Regulation	(HL-LL)	$\pm 0.5\%$
Temperature Coefficient	$\pm 0.02\%/^{\circ}\text{C}$	
Ripple	0.2% +40mVp-p max.	
Noise	0.5% +50mVp-p max.	
Voltage Accuracy	$\pm 2\%$	
Over Power Protection	120% of FL, auto recover	
Short Circuit Protection	Current Limit, auto recover	
Efficiency	See Selection Chart	

GENERAL SPECIFICATIONS

Input-Out Isolation	1600VDC
Isolation Resistance	10-8th Ω min.
Isolation Capacitance	1000 pF
Switching Frequency	300Khz

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-25 to +71 $^{\circ}\text{C}$ (FL)
Humidity	95% RH
Storage Temperature	-55 to +105 $^{\circ}\text{C}$ *
Max. Case Temperature	100 $^{\circ}\text{C}$
Cooling	Free Air Convection
MTBF (MIL-HDBK-217F, 25 $^{\circ}\text{C}$)	>800,000 Hours

PHYSICAL SPECIFICATIONS

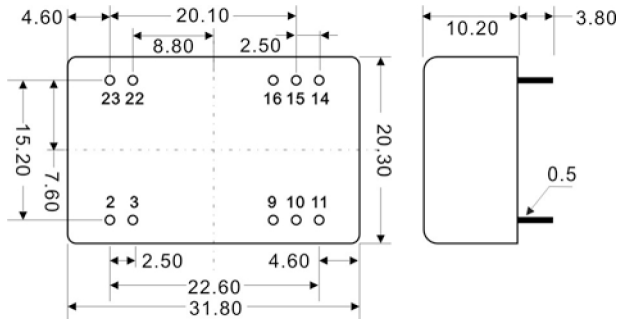
Case Material	Six sided shielded black anodized aluminum with non conductive base,
Construction	Fully Encapsulated
Size	1.25"x0.8"x0.4" (31.8x20.3x10.2mm)
Weight	0.46 oz, (13g)

All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

MECHANICAL DIMENSIONS

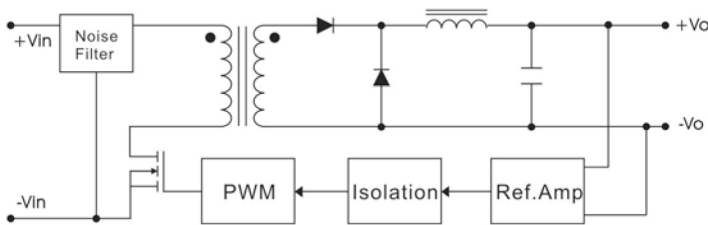


ALL DIMENSIONS IN mm
PIN PITCH TOLERANCE +/- 0.35mm

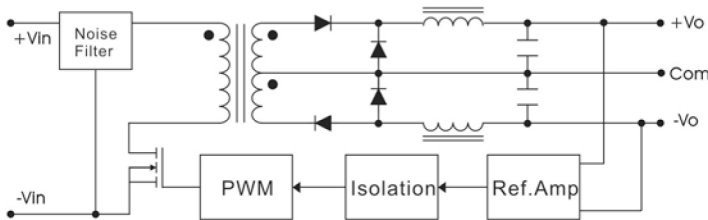
Pin #	Single Outputs	Dual Outputs
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Common
10	NC	NC
11	NC	- Output
14	+ Output	+ Output
15	NC	NC
16	- Output	Common
22	+Vin	+Vin
23	+Vin	+Vin

BLOCK DIAGRAMS

Single Output



Dual Output



OUTPUT DERATING CURVE

