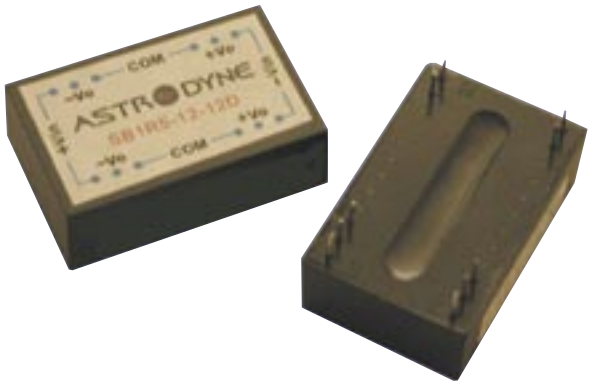
ASTRODYNE

Isolated and Regulated 1.5 WATT Modular DC/DC Converters

SB1R5 series



Unit measures 0.8”W x 1.25”L x 0.4”H

- Low Ripple and Noise
- Regulated Outputs
- 500V Isolation
- Short Circuit Protection
- Standard Pinouts
- Input PI Filter

Model Number	Output Voltage	Output Amps	Input Range
SINGLE OUTPUT			
SB1R5-55S	5 VDC	300	4.5-5.5 VDC
SB1R5-125S		300	10.8-13.2 VDC
SB1R5-245S		300	21.6-26.4 VDC
SB1R5-485S		300	43.2-52.8 VDC
SB1R5-512S	12 VDC	125	4.5-5.5 VDC
SB1R5-1212S		125	10.8-13.2 VDC
SB1R5-2412S		125	21.6-26.4 VDC
SB1R5-4812S		125	43.2-52.8 VDC
SB1R5-515S	15 VDC	100	4.5-5.5 VDC
SB1R5-1215S		100	10.8-13.2 VDC
SB1R5-2415S		100	21.6-26.4 VDC
SB1R5-4815S		100	43.2-52.8 VDC
SB1R5-524S	24VDC	63	4.5-5.5 VDC
SB1R5-1224S		63	10.8-13.2 VDC
SB1R5-2424S		63	21.6-26.4 VDC
SB1R5-4824S		63	43.2-52.8 VDC

300 Myles Standish Blvd., Taunton, MA 02780
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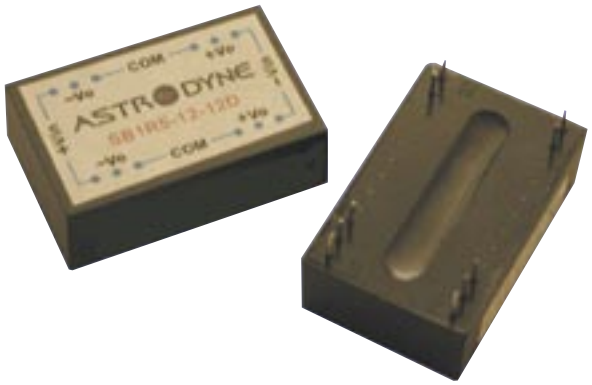

Unit measures 0.8”W x 1.25”L x 0.4”H

- Low Ripple and Noise
- Regulated Outputs
- 500V Isolation
- Short Circuit Protection
- Standard Pinouts
- Input PI Filter

Model Number	Output Voltage	Output Amps	Input Range
DUAL OUTPUT			
SB1R5-55D	+/-5 VDC	+/-150	4.5-5.5 VDC
SB1R5-125D		+/-150	10.8-13.2 VDC
SB1R5-245D		+/-150	21.6-26.4 VDC
SB1R5-485D		+/-150	43.2-52.8 VDC
SB1R5-512D	+/-12 VDC	+/-60	4.5-5.5 VDC
SB1R5-1212D		+/-60	10.8-13.2 VDC
SB1R5-2412D		+/-60	21.6-26.4 VDC
SB1R5-4812D		+/-60	43.2-52.8 VDC
SB1R5-515D	+/-15 VDC	+/-50	4.5-5.5 VDC
SB1R5-1215D		+/-50	10.8-13.2 VDC
SB1R5-2415D		+/-50	21.6-26.4 VDC
SB1R5-4815D		+/-50	43.2-52.8 VDC

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INPUT SPECIFICATIONS

Input Voltage Ranges:	5 VDC Nominal	4.5-5.5 VDC
	12 VDC Nominal	10.8-13.2 VDC
	24 VDC Nominal	21.6-26.4 VDC
	48 VDC Nominal	43.2-52.8 VDC

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart	
Load Regulation	10% to FL	+/- 0.5%
Line Regulation	(HL-LL)	+/- 0.3%
Temperature Coefficient	+/-0.02%/°C	
Ripple/Noise(Single/Dual)	0.7% +40mVp-p max.	
Voltage Accuracy	+/- 3%	
Short Circuit Protection	Continuous	
Efficiency	55D, 125D, 245D, 485D	52%
	512S, 512D, 515D,	
	1212S, 1212D, 1215D,	
	2412S, 2412D, 2415D,	
	4812S, 4812D, 4815D	54%
	55S, 515S, 524S,	
	125S, 1215S, 1224S,	
	245S, 2415S, 2424S,	
	485S,4815S, 4824S	55%

GENERAL SPECIFICATIONS

Input-Out Isolation	500VDC
Isolation Resistance	10-9nth Ohm min.
Switching Frequency	20Khz

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-25 to +71°C(FL)
Storage Temperature	-55 to +105°C *
Cooling	Free Air Convection
MTBF	568,608 Hrs

PHYSICAL SPECIFICATIONS

Case Material	Non-Conductive Black Plastic
Construction	Fully Encapsulated
Weight	0.5 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 warranteed nor implied.

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

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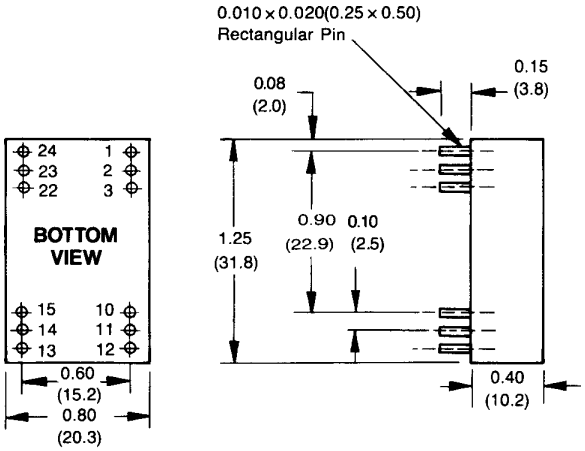
MECHANICAL DIMENSIONS

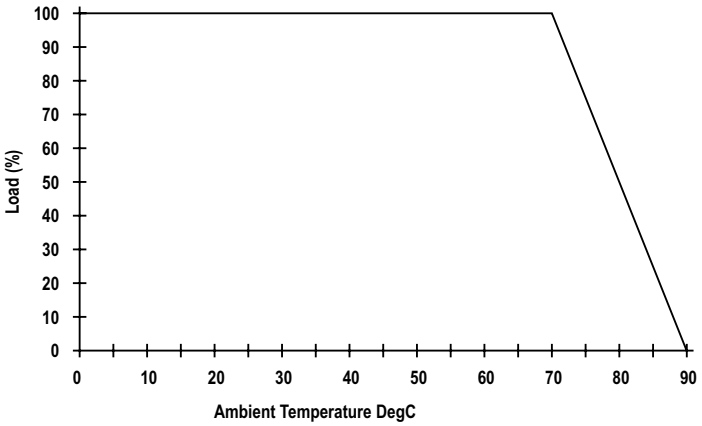


ALL DIMENSIONS IN INCHES(mm)

PIN PITCH TOLERANCE ±0.35mm

Pin #	Single Outputs	Dual Outputs
1	+ Input	+ Input
2	No Pin	- Output
3	No Pin	Common
10	- Output	Common
11	+ Output	+ Output
12	- Input	- Input
13	- Input	- Input
14	+ Output	+ Output
15	- Output	Common
22	NC	Common
23	NC	- Output
24	+ Input	+ Input

OUTPUT DERATING CURVE



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