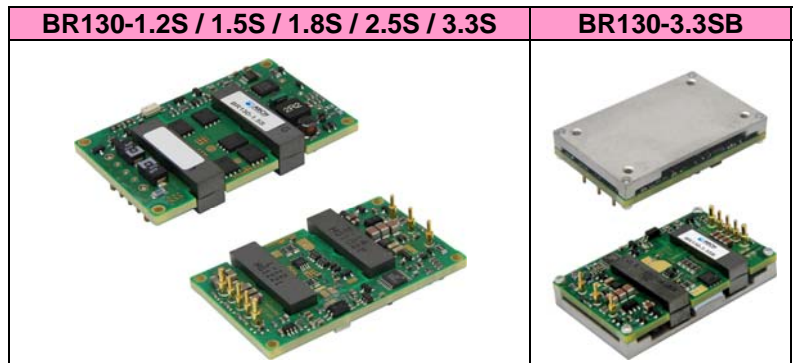


BR130 SERIES
36/60/72/100/132 Watts
KEY FEATURES

- Input under Voltage Protection
- Over Current Protection (Hiccup Mode)
- Short Circuit Protection (Hiccup Mode)
- Over Voltage Protection (Hiccup Mode)
- Over Temperature Protection (Self-recovery)
- Remote ON/OFF Control
- Remote Sense
- Output Voltage Trim
- UL60950-1 and CSA C22.2 No. 60950-1-07
- Meet UL94V-0 Flammability Requirements
- Rohs6 Compliant
- Size: 2.28 x 1.45 x 0.38 Inches (others Model)
2.28 x 1.45 x 0.39 Inches (BR130-3.3S)
2.28 x 1.45 x 0.5 Inches (BR130-3.3SB)
- 3-Years Product Warranty

DESCRIPTION

The BR130 series is a new generation isolated DC-DC converter that uses an industry standard quarter-brick structure, and features high efficiency and power density, operates from an input voltage range of 36 V to 75 V, provides the rated output voltage of 1.2V / 1.5V / 1.8V / 2.5V / 3.3V and the maximum output current of 30A / 40A.


ELECTRICAL SPECIFICATIONS

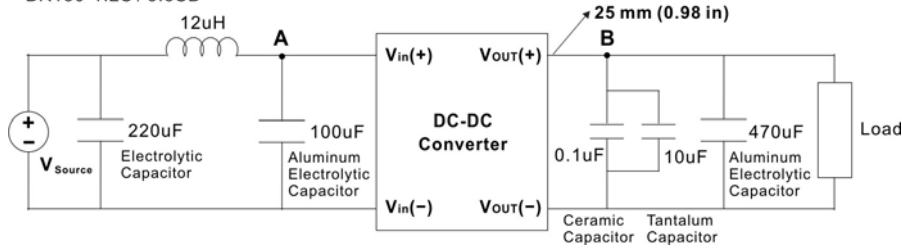
Conditions: TA = 25°C (77°F), Airflow = 1 m/s (200 LFM), Vin = 48 V, unless otherwise notes.



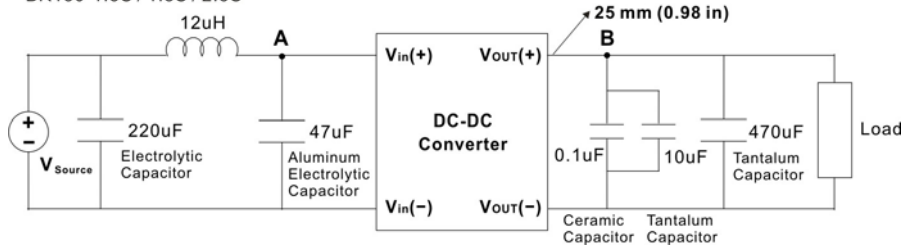
Model No.	BR130-1.2S	BR130-1.5S	BR130-1.8S	BR130-2.5S	BR130-3.3S	BR130-3.3SB				
Max Output Wattage (W)	36W	60W	72W	100W	132W					
Input	Voltage (V.DC.)									
	48V (36~75V)									
	Current (A) (max)									
		1.3A	2A	2.4A	3.5A	4.5A				
		No-Load Loss (W) (typ.)								
		1W	2W	2W	3.5W	3.6W				
Output	Voltage (V.DC.)									
	1.2V									
	Regulated Voltage Precision (max.)									
	±3%									
	Current (A) (max.)									
			30A	40A						
	Line Regulation (LL-HL) (typ.)									
			±0.2%	±0.2%	±1%	±0.2%	±0.2%			
	Load Regulation (0-100%) (typ.)									
		±0.2%	±0.3%	±1%	±0.3%	±0.3%				
Ripple & Noise (peak to peak) (typ.) (Oscilloscope Bandwidth:20 MHz)										
		100 mV	100 mV	100 mV	100 mV	120 mV				
		Efficiency (typ.) (Vin = 48 V; TA=25°C (77°F))		100% Load	89.5%	90.5%	91.5%	92%	93.5%	93.5%
				50% Load	89.5%	91.5%	92%	92%	93.5%	93.5%
				20% Load	—	87%	87%	86.5%	87.5%	—
Protection	Over Power Protection									
	Hiccup mode									
	Over Current Protection									
	Hiccup mode									
	Over Voltage Protection									
		1.4~2.0V (Hiccup mode)	1.8~2.5V (Hiccup mode)	2.2~3.0V (Hiccup mode)	3.0~3.8V (Hiccup mode)	3.9~4.7V (Hiccup mode)				
Short Circuit Protection (max.)										
Hiccup mode										
Over Temperature Protection										
Threshold:115~135°C (typ.) / Hysteresis:5°C (min.) Self-recovery (The values are obtained by measuring the temperature of the hottest power component on the top surface of the converter.)										
Isolation	Voltage (V.DC.)									
1500 VDC (Functional Isolation)										
Environment	Operating Temperature									
	-40°C...+85°C									
	Storage Temperature									
	-55°C...+125°C									
	Temperature Coefficient (max.)									
0.02 % Vout / °C (TA = -40°C to +85°C (-40°F to +185°F))										
Humidity										
95% RH										
MTBF										
		2.5 Million Hr	1.5 Million Hr	1.5 Million Hr	1.5 Million Hr	1.5 Million Hr				
		2.5 Million Hr								
		(Telcordia SR332; 80% load; Airflow = 1.5m/s (300 LFM); TA = 40°C (104°F))								
Safety	Agency Approvals									
CE, UL, TÜV										
EMC	EMI (Conducted & Radiated Emission)									
UL60950-1 and CSA C22.2 No. 60950-1-07										
Physical	Dimension (L x W x H)									
	Tolerance ±0.5 mm									
	Weight									
		38 g	38 g	38 g	38 g	40 g				
Other	Remote On/Off Voltage		Low level (V.DC.)		-0.7~1.2V					
			High level (V.DC.)		3.5~12V					
	On/Off Current		Low level (mA) (max.)		1mA					

NOTE

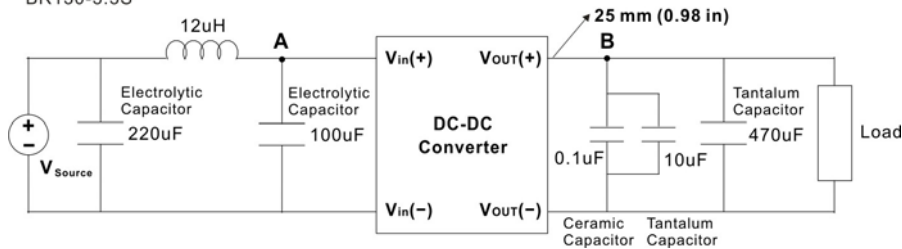
BR130-1.2S / 3.3SB



BR130-1.5S / 1.8S / 2.5S

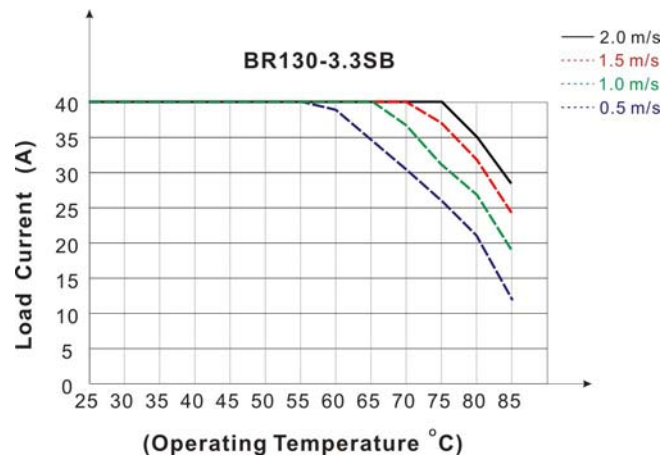
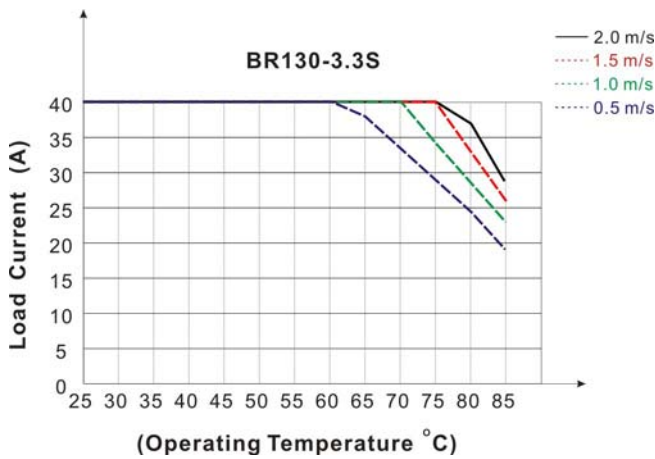
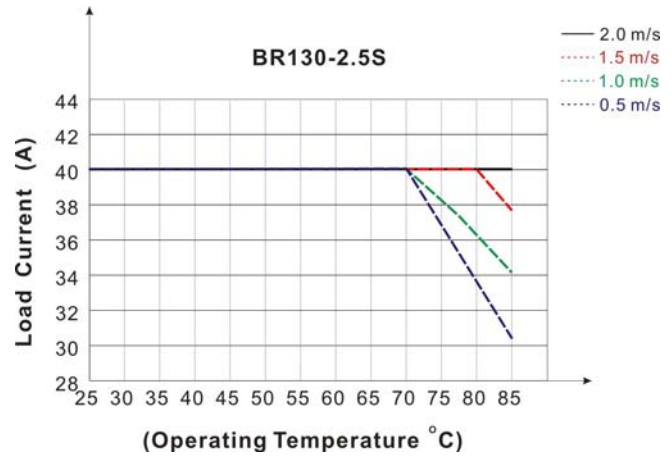
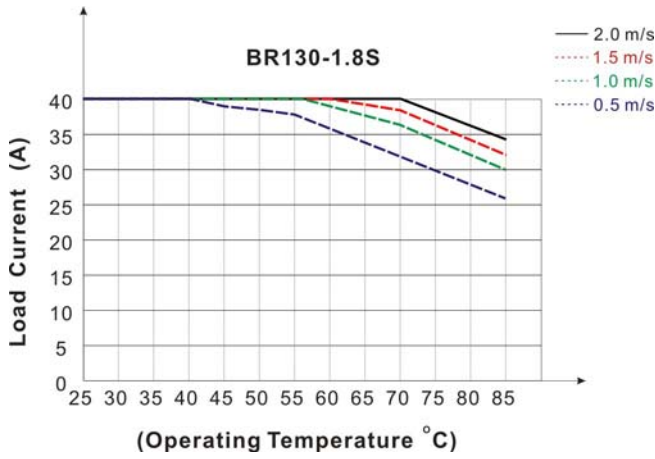
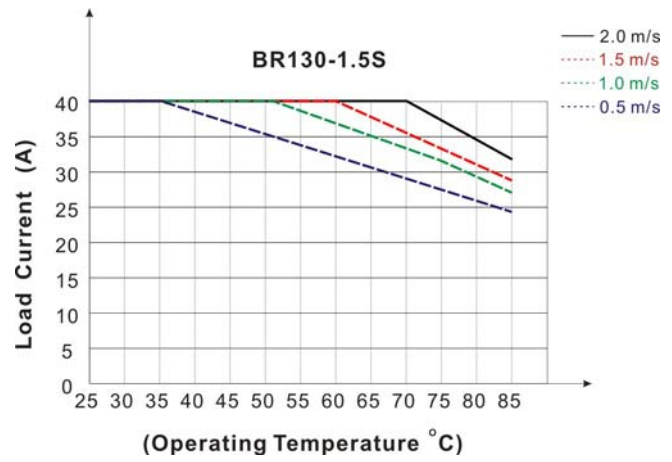
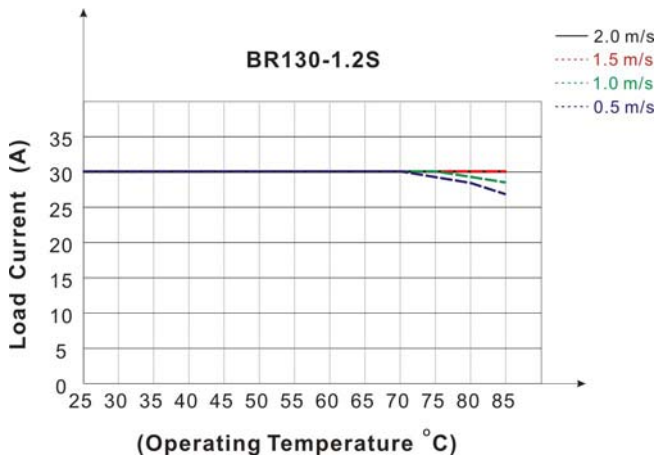


BR130-3.3S



1. During the test of input reflected ripple current, the input terminal must be connected to a 12uH inductor and a 220uF electrolytic capacitor.
2. Point B, which is for testing the output voltage ripple, is 25 mm (0.98 in.) away from the Vout(+) pin.

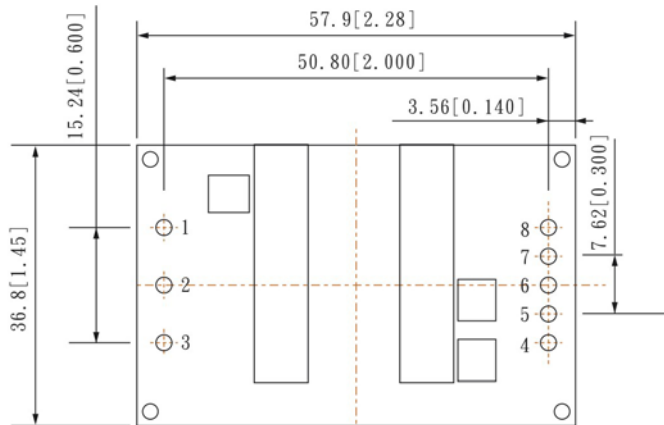
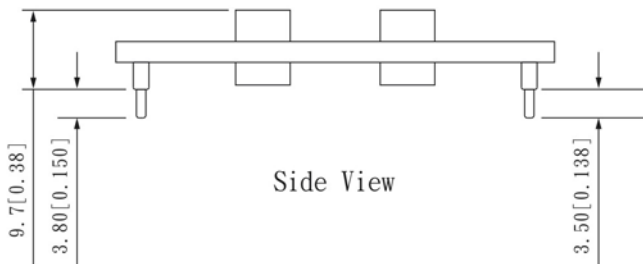
DERATING



MECHANICAL DIMENSION

BR130-1.2S / BR130-1.5S / BR130-1.8S / BR130-2.5S / BR130-3.3S

Unit: mm [in.]


 Top View
(Facedown pins)


Side View

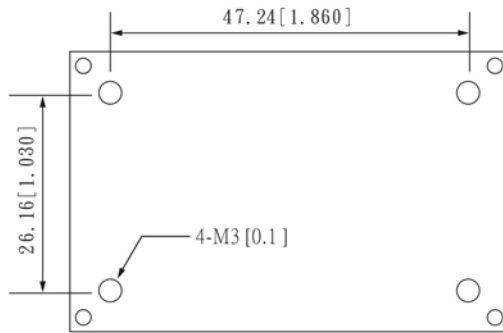
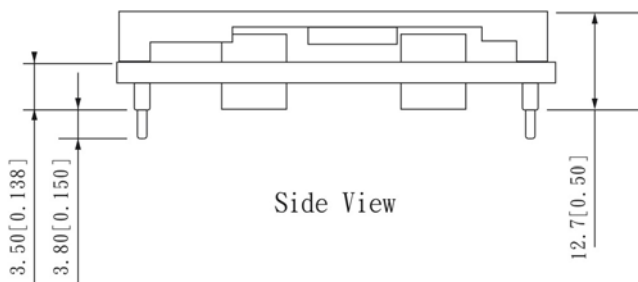
PIN#	Single
1	+DC IN
2	ON / OFF CTL
3	-DC IN
4	-DC OUT
5	-Sense
6	TRIM
7	+Sense
8	+DC OUT

Note

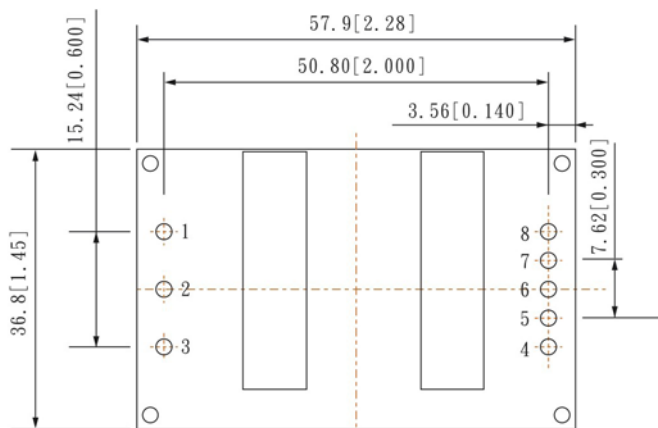
- All dimensions in mm [in.] Tolerances: $x.x \pm 0.5$ mm [$x.xx \pm 0.02$ in.] $x.xx \pm 0.25$ mm [$x.xxx \pm 0.010$ in.]
- Pin 1-3, 5-7 are 1.00 ± 0.05 mm [0.040 ± 0.002 in.] diameter with 2.00 ± 0.10 mm [0.080 ± 0.004 in.] diameter standoff shoulders.
Pin4 and pin8 are 1.50 ± 0.05 mm [0.060 ± 0.002 in.] diameter with 2.50 ± 0.10 mm [0.098 ± 0.004 in.] diameter standoff shoulders.

MECHANICAL DIMENSION
BR130-3.3SB

Unit: mm [in.]


 Top View
(Facedown pins)


Side View


 Bottom View
(Facedown pins)

PIN#	Single
1	+DC IN
2	ON / OFF CTL
3	-DC IN
4	-DC OUT
5	-Sense
6	TRIM
7	+Sense
8	+DC OUT

Note

1. All dimensions in mm [in.] Tolerances: $x.x \pm 0.5$ mm [$x.xx \pm 0.02$ in.] $x.xx \pm 0.25$ mm [$x.xxx \pm 0.010$ in.]
2. Pin 1-3, 5-7 are 1.00 ± 0.05 mm [0.040 ± 0.002 in.] diameter with 2.00 ± 0.10 mm [0.080 ± 0.004 in.] diameter standoff shoulders. Pin4 and pin8 are 1.50 ± 0.05 mm [0.060 ± 0.002 in.] diameter with 2.50 ± 0.10 mm [0.098 ± 0.004 in.] diameter standoff shoulders.
3. M3 Screw used to bolt unit's baseplate to other surfaces (such as heatsink) must not exceed 3.00 mm (0.120 in.) depth below the surface of baseplate.