BR300 SERIES 300 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 0.5 Inches
- 3-Years Product Warranty

DESCRIPTION

The BR300-12S 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 12V and the maximum output current of 25A.

ELECTRICAL SPECIFICATIONS

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

Model No.				BR300-12S
Max Output Wattage (W)				300W
Input	Voltage (V.DC.)			48V (36~75V)
	Current (A) (max)			15A
	No-Load Loss (W) (typ.)			3.5W
Output	Voltage (V.DC.)			12V
	Regulated Voltage Precision (max.)			±3.5%
	Current (A) (max.)			25A
	Line Regulation (LL-HL) (typ.)			±0.2%
	Load Regulation (0-100%) (typ.)			±3%
	Ripple & Noise (peak to peak) (typ.)			150 mV (Oscilloscope Bandwidth:20 MHz)
	Efficiency (typ.) (Vin = 48 V; TA=25°C (77°F))		100% Load	95%
			50% Load	95.5%
			20% Load	92%
Protection	Over Power Protection			Hiccup mode
	Over Current Protection			Hiccup mode
	Over Voltage Protection			13.8~16.8V (Hiccup mode)
	Short Circuit Protection (max.)			Hiccup mode
	Over Temperature Protection			Threshold:105~125°C (typ.) / Hysteresis:5°C (min.) Self-recovery (The values are obtained by measuring the temperature of the PCB near the thermal resistor.)
Isolation	Voltage (V.DC.)			1500 VDC (Basic 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			1.5 Million Hours (Telcordia SR332; 80% load; Airflow = 1.5m/s (300 LFM); TA = 40°C (104°F)
Safety	Agency Approvals			CE, UL, TUV
EMC	EMI (Conducted & Radiated Emission)			UL60950-1 and CSA C22.2 No. 60950-1-07
Physical	Dimension (L x W x H)			2.28 x 1.45 x 0.5 Inches (57.9 x 36.8 x 12.7 mm) Tolerance ±0.5 mm
	Weight			60 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

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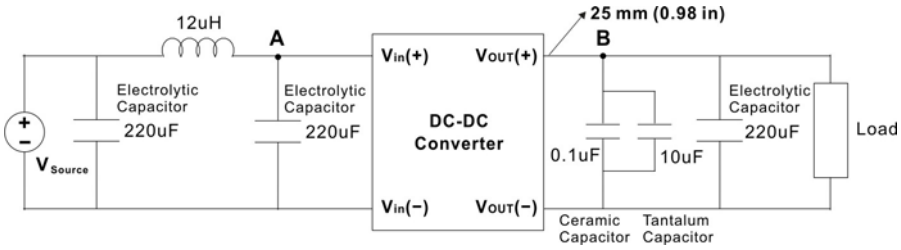
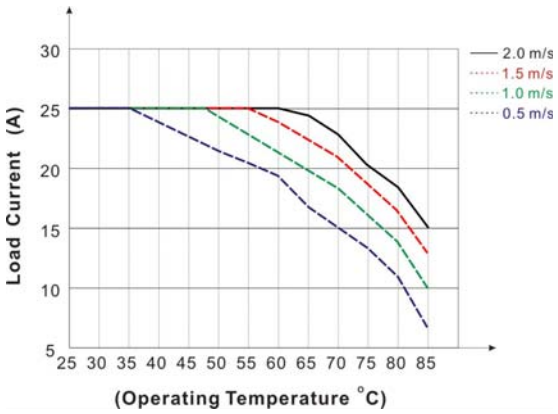
NOTE



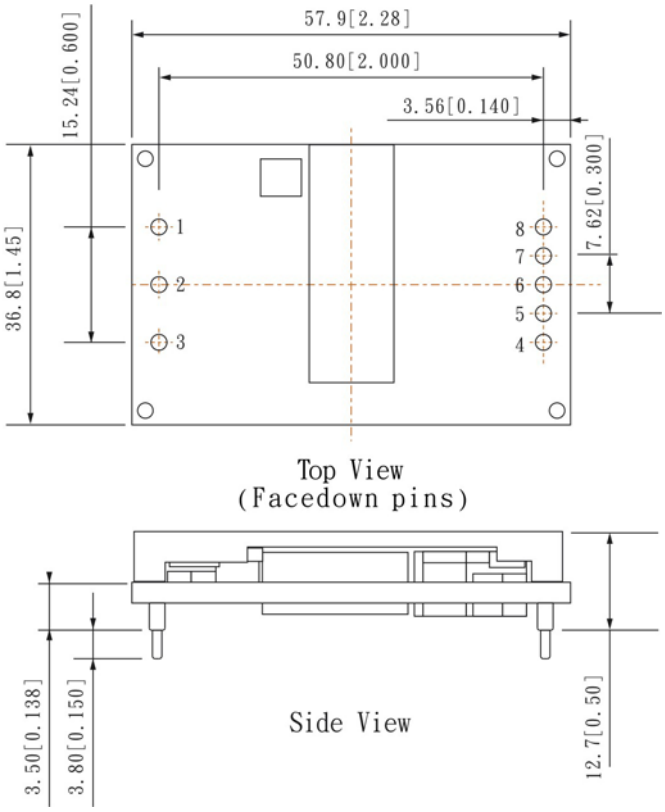
1. During the test of input reflected ripple current, the input terminal must be connected to a 12uH inductor and a 220uF electrolytic capacitor.
2. Point B, which is for testing the output voltage ripple, is 25 mm (0.98 in.) away from the Vout(+) pin.

DERATING



MECHANICAL DIMENSION

Unit: mm [in.]



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 ± 0.5 mm [x.xx ± 0.02 in.] x.xx± 0.25 mm [x.xxx ± 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.