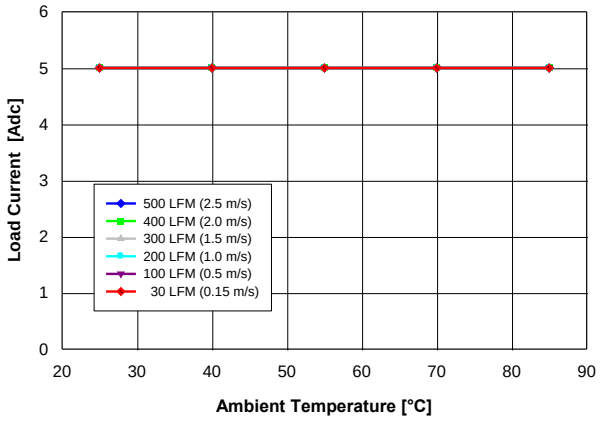

Fig. 1.2V.1: Available load current vs. ambient temperature and airflow rates for Vout = 1.2 V converter mounted vertically with Vin = 12 V, and maximum MOSFET temperature ≤ 120 °C.

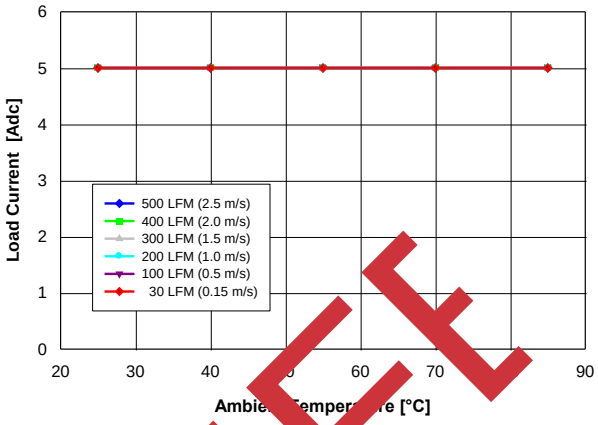

Fig. 1.2V.2: Available load current vs. ambient temperature and airflow rates for Vout = 1.2 V converter mounted horizontally with Vin = 12 V, and maximum MOSFET temperature ≤ 120 °C.

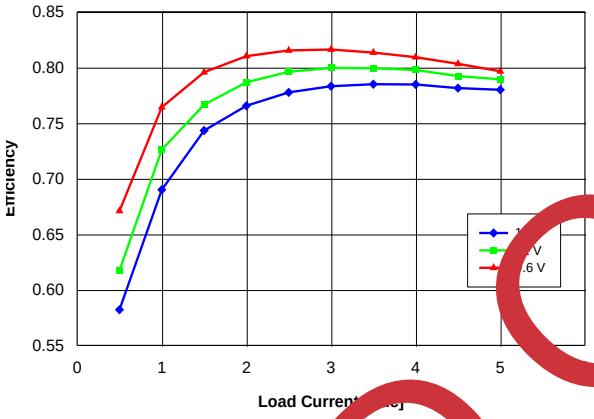

Fig. 1.2V.3: Efficiency vs. load current and input voltage for Vout = 1.2 V converter mounted vertically with air flowing at a rate of 200 LFM (1 m/s) and Ta = 25 °C.

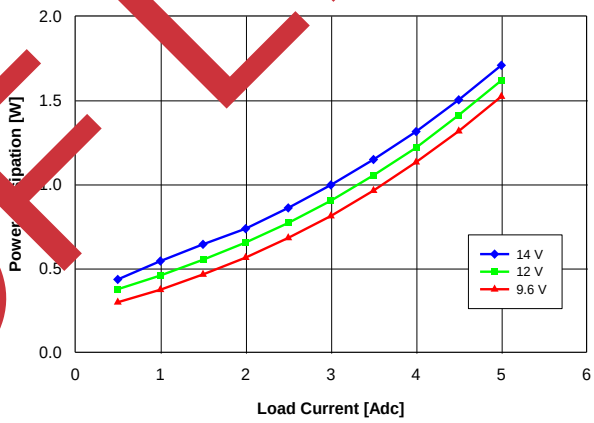

Fig. 1.2V.4: Power Loss vs. load current and input voltage for Vout = 1.2 V converter mounted vertically with air flowing at a rate of 200 LFM (1 m/s) and Ta = 25 °C.

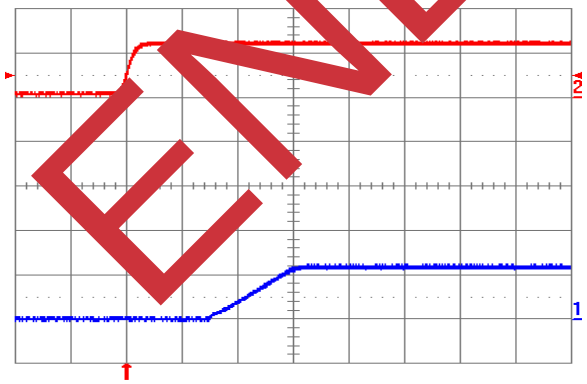

Fig. 1.2V.5: Turn-on transient for Vout = 1.2 V with application of Vin at full rated load current (resistive) and 47 µF external capacitance at Vin = 12 V. Top trace: Vin (10 V/div.); Bottom trace: output voltage (1 V/div.); Time scale: 5 ms/div.

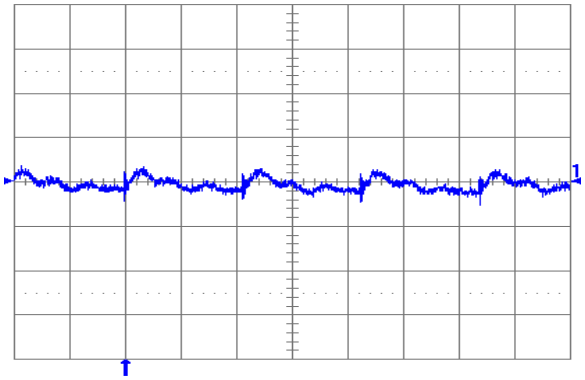

Fig. 1.2V.6: Output voltage ripple (20 mV/div.) at full rated load current into a resistive load with external capacitance 47 µF ceramic + 1 µF ceramic, and Vin = 12 V for Vout = 1.2 V. Time scale: 1 µs/div.

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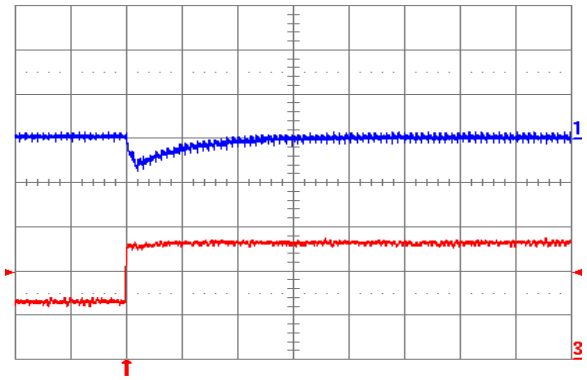

Fig. 1.2V.7: Output voltage response for Vout = 1.2 V to positive load current step change from 2.5 A to 5 A with slew rate of 5 A/µs at Vin = 12 V. Top trace: output voltage (100 mV/div.); Bottom trace: load current (2 A/div.). Co = 47 µF ceramic. Time scale: 20 µs/div.

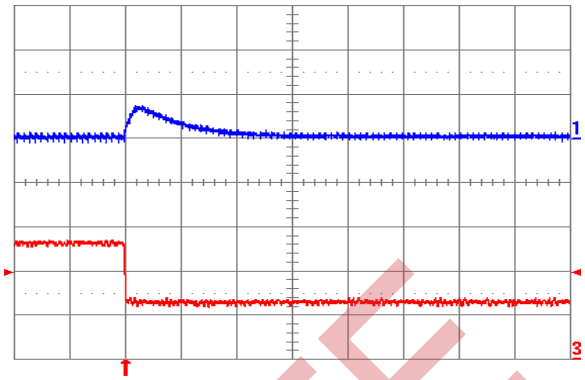

Fig. 1.2V.8: Output voltage response for Vout = 1.2 V to negative load current step change from 5 A to 2.5 A with slew rate of -5 A/µs at Vin = 12 V. Top trace: output voltage (100 mV/div.); Bottom trace: load current (2 A/div.). Co = 47 µF ceramic. Time scale: 20 µs/div.

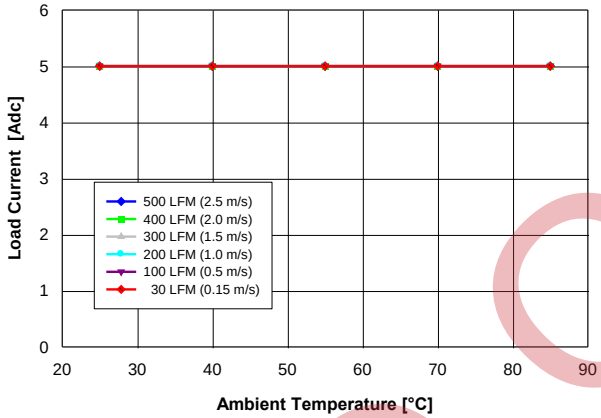

Fig. 1.0V.1: Available load current vs. ambient temperature and airflow rates for Vout = 1.0 V converter mounted vertically with Vin = 12 V, and maximum MOSFET temperature ≤ 120 °C.

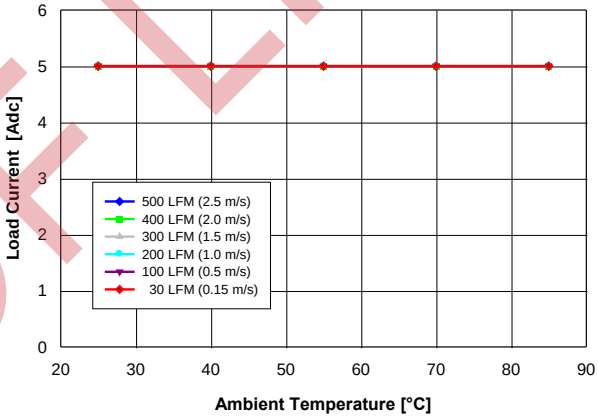

Fig. 1.0V.2: Available load current vs. ambient temperature and airflow rates for Vout = 1.0 V converter mounted horizontally with Vin = 12 V, and maximum MOSFET temperature ≤ 120 °C.

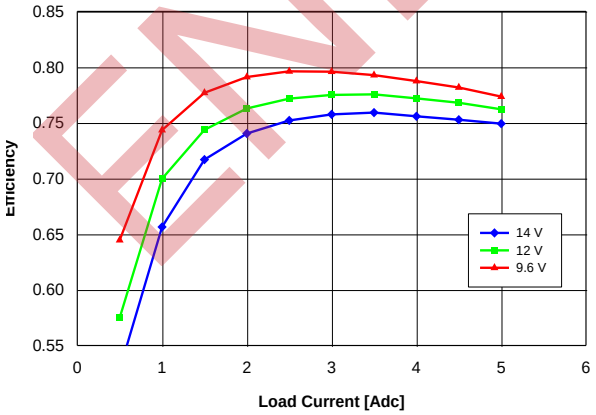

Fig. 1.0V.3: Efficiency vs. load current and input voltage for Vout = 1.0 V converter mounted vertically with air flowing at a rate of 200 LFM (1 m/s) and Ta = 25 °C.

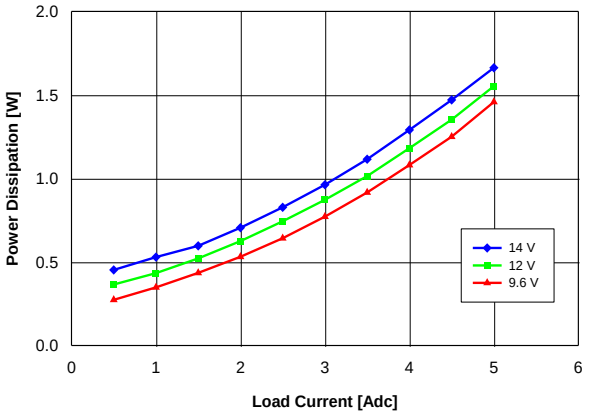

Fig. 1.0V.4: Power Loss vs. load current and input voltage for Vout = 1.0 V converter mounted vertically with air flowing at a rate of 200 LFM (1 m/s) and Ta = 25 °C.

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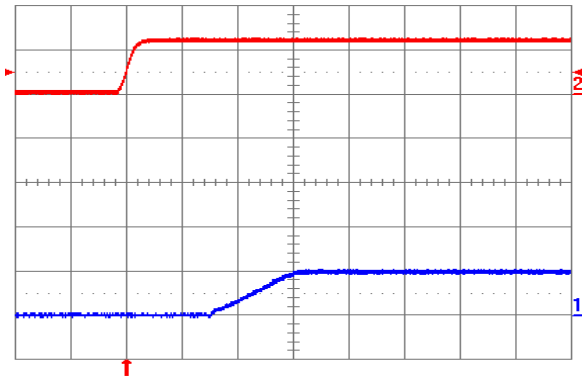

Fig. 1.0V.5: Turn-on transient for Vout = 1.0 V with application of Vin at full rated load current (resistive) and 47 µF external capacitance at Vin = 12 V. Top trace: Vin (10 V/div.); Bottom trace: output voltage (1 V/div.); Time scale: 5 ms/div.

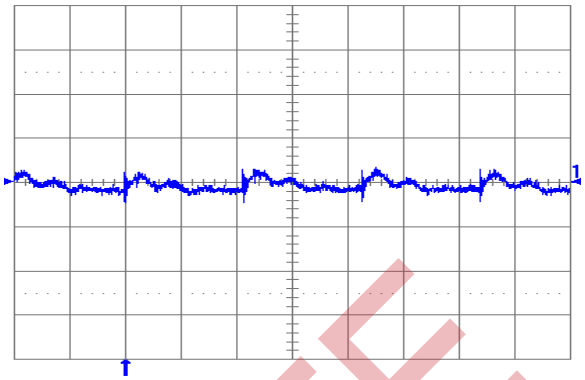

Fig. 1.0V.6: Output voltage ripple (20 mV/div.) at full rated load current into a resistive load with external capacitance 47 µF ceramic + 1 µF ceramic, and Vin = 12 V for Vout = 1.0 V. Time scale: 1 µs/div.

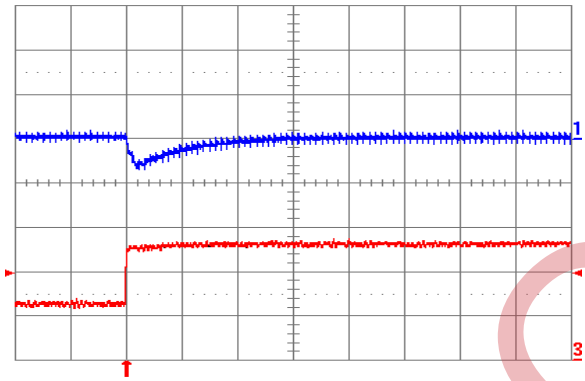

Fig. 1.0V.7: Output voltage response for Vout = 1.0 V to positive load current step change from 2.5 A to 5 A with slew rate of 5 A/µs at Vin = 12 V. Top trace: output voltage (100 mV/div.); Bottom trace: load current (2 A/div.). Co =47 µF ceramic. Time scale: 20 µs/div.

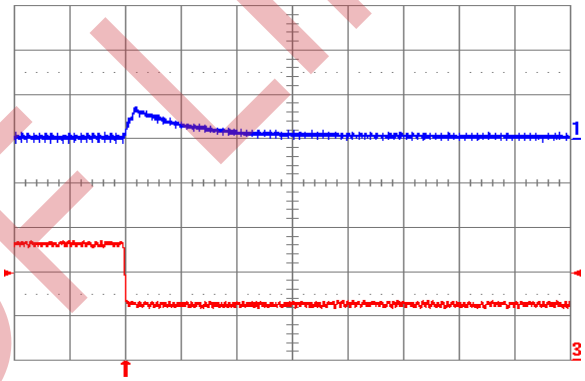

Fig. 1.0V.8: Output voltage response for Vout = 1.0 V to negative load current step change from 5 A to 2.5 A with slew rate of -5 A/µs at Vin = 12 V. Top trace: output voltage (100 mV/div.); Bottom trace: load current (2 A/div.). Co = 47 µF ceramic. Time scale: 20 µs/div.

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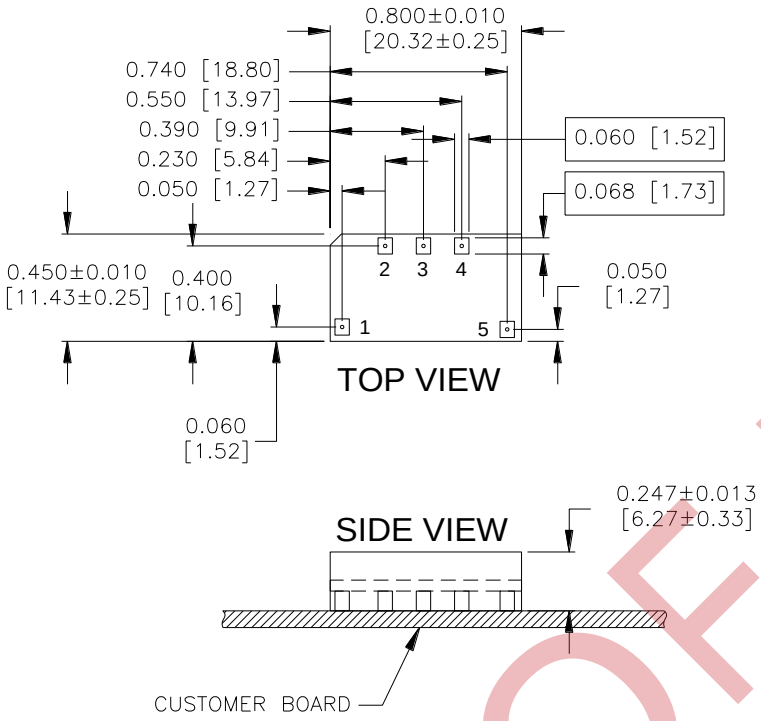
5. PHYSICAL INFORMATION



YNM12S Pinout (Surface Mount)

PAD/PIN CONNECTIONS	
Pad/Pin #	*Function*
1	ON/OFF
2	Vout
3	TRIM
4	GND
5	Vin

YNM12S Platform Notes

- All dimensions are in inches [mm]
- Connector Material: Copper
- Connector Finish: Gold over Nickel
- Converter Weight: 0.08 oz [2.26 g]
- Converter Height: 0.260" Max., 0.234" Min.
- Recommended Surface-Mount Pads: Min. 0.080" X 0.112" [2.03 x 2.84]

6. ORDERING INFORMATION

PRODUCT SERIES	INPUT VOLTAGE	MOUNTING SCHEME	RATED LOAD CURRENT		ROHS COMPATIBLE
YNM	**12**	**S**	**05**	–	
Y-Series	9.6 to14 VDC	S ⇒ Surface-Mount	5 A (0.7525 V to 5.5 V)		No Suffix ⇒ RoHS lead-solder-exempt compliant G ⇒ RoHS compliant for all six substances

The example above describes P/N YNM12S05: 9.6 to 14 VDC input, surface-mount, 5 A at 0.7525 to 5.5 VDC output, and Eutectic Tin/Lead solder. Please consult factory regarding availability of a specific version.

The YNM12S05 is not recommended for new designs and has been replaced by the YM12S05. Please refer to the YM12S05 data sheet for new product specifications.

For more information on these products consult: tech.support@psbel.com

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.
TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.

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