

PR-N SERIES

1W REGULATED

DANUBE

FEATURES

- SINGLE IN LINE PACKAGE
- UP TO 1W REGULATED OUTPUT POWER
- 100% BURN IN
- EFFICIENCY UP TO 73%
- INTERNAL SMD TECHNOLOGY
- NO EXTERNAL COMPONENTS REQUIRED
- LOW COST
- 1500VDC ISOLATION
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- RoHS COMPLIANT
- 3 YEARS WARRANTY



OUTPUT SPECIFICATIONS

Voltage Set-point Accuracy	+/-3% max.
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max.
Line Regulation ²	+/-1.5% max.
Load Regulation ³	+/-1.5% max.
Minimum Load	10% of Full Load
Short Circuit Protection(PRS-N)	Current Limit Protection 3min max.
Short Circuit Protection(PRD-N)	1s max.
Short Circuit Restart	Automatic
Transient Response ⁵	100uS max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 °C to +85 °C(Derating)
Storage Temperature	
Case Temperature	110 °C max
Humidity	95% max.
Cooling	Free-Air Convection

INPUT SPECIFICATIONS

Input Voltage Range	+10%/-5% max.
Input Filter	Capacitor Type
Protection	Fuse Recommended

GENERAL SPECIFICATIONS

Efficiency	73% typ.
Isolation Voltage ⁴	1500 VDC or 1000VAC min.
Isolation Resistance	10 ⁹ ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	100KHz typ.
MTBF ⁶	>1,000,000 Hours
Weight	2.5g typ.
Case Material	Non-Conductive Plastic
Case Size	19.6mm*7.1mm*10.14mm
Radiated Emissions	EN55032 ClassB

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD AND 25 °C UNLESS OTHERWISE NOTED.

¹ Measured with 1uF ceramic capacitor connect to the output pins.

² High Line to Low Line.

³ Load Regulation is for output load current change from 10% to 100%.

⁴ 1500VDC or 1000VAC for 60 seconds.

⁵ 25% Step Load Change.

⁶ MIL-HDBK-217F @25 °C , Ground Benign.

● SELECTION GUIDE

1W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷ CURRENT(mA)		EFF (%) ⁸	ISOLATION (VDC)	PACKAGE
				FULL LOAD	NO LOAD			
PRS-0505NC	4.75-5.5	5	200	294	38	68	1500	C
PRS-0512NC	4.75-5.5	12	84	282	38	71	1500	C
PRS-0515NC	4.75-5.5	15	67	282	40	71	1500	C
PRD-0512NC	4.75-5.5	+/-12	+/-42	303	45	66	1500	C
PRD-0515NC	4.75-5.5	+/-15	+/-34	299	45	67	1500	C
PRS-1205NC	11.4-13.2	5	200	116	18	72	1500	C
PRS-1212NC	11.4-13.2	12	84	116	18	72	1500	C
PRS-1215NC	11.4-13.2	15	67	114	18	73	1500	C
PRD-1212NC	11.4-13.2	+/-12	+/-42	123	18	68	1500	C
PRD-1215NC	11.4-13.2	+/-15	+/-34	121	18	69	1500	C
PRS-2405NC	22.8-26.4	5	200	62	10	67	1500	C
PRS-2412NC	22.8-26.4	12	84	58	10	72	1500	C
PRS-2415NC	22.8-26.4	15	67	57	10	73	1500	C
PRD-2412NC	22.8-26.4	+/-12	+/-42	61	10	68	1500	C
PRD-2415NC	22.8-26.4	+/-15	+/-34	61	11	68	1500	C
PRS-4805NC	45.6-52.8	5	200	31	7	67	1500	C
PRS-4812NC	45.6-52.8	12	84	31	7	67	1500	C
PRS-4815NC	45.6-52.8	15	67	31	8	67	1500	C
PRD-4812NC	45.6-52.8	+/-12	+/-42	33	8	63	1500	C
PRD-4815NC	45.6-52.8	+/-15	+/-34	33	8	63	1500	C

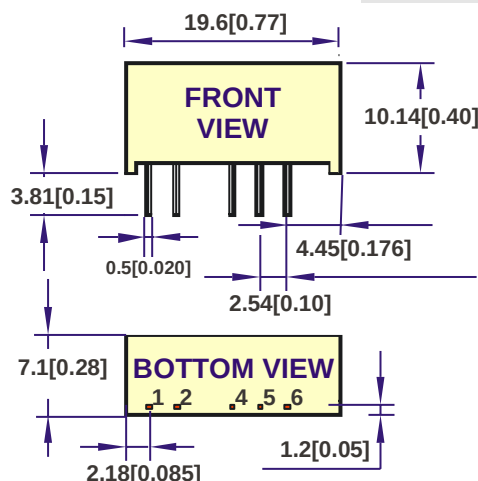
Note: Other input to output voltages may be available. Please contact factory.

⁷ NOMINAL INPUT VOLTAGE.

⁸ NOMINAL INPUT VOLTAGE, FULL LOAD.

MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

PACKAGE "C"



All dimensions are in mm[inches]

PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	NP	COMMON
6	+Vout	+Vout

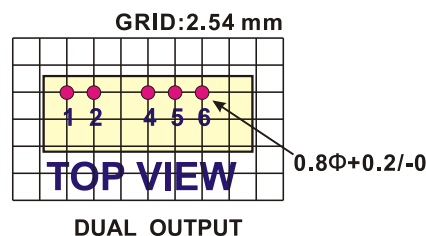
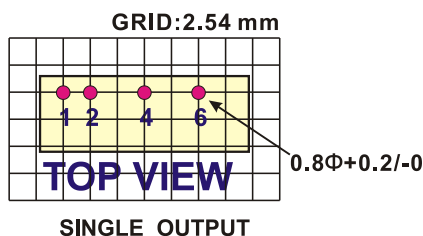
NOTE :

All dimensions are in mm(Inches)

1. Pin Size is 0.50x0.30mm[0.02x0.01"]

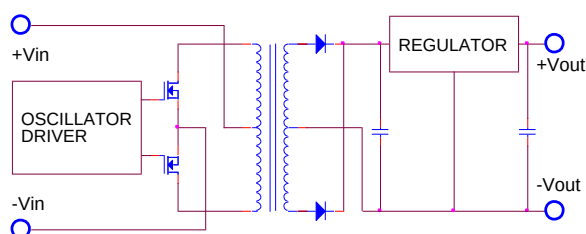
2. Pin is Tolerance .XX= ± 0.05 mm

3. Tolerance .X or .XX= ± 0.5 mm

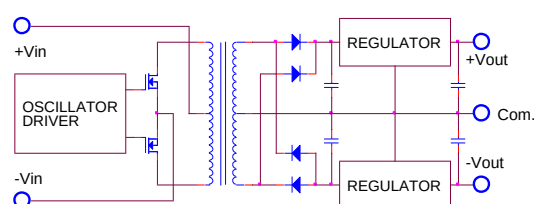


SIMPLIFIED SCHEMATIC

SINGLE OUTPUT

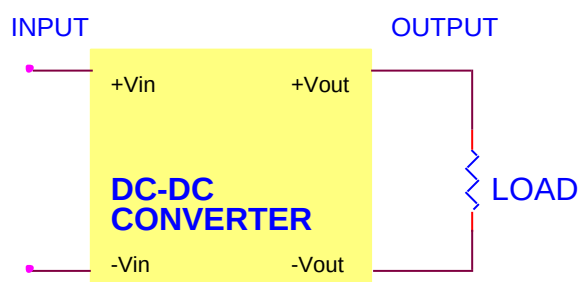


DUAL OUTPUT

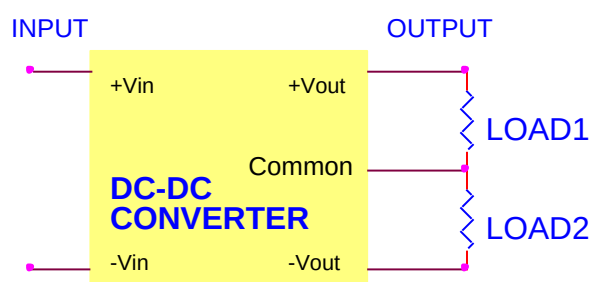


TYPICAL APPLICATIONS

SINGLE OUTPUT

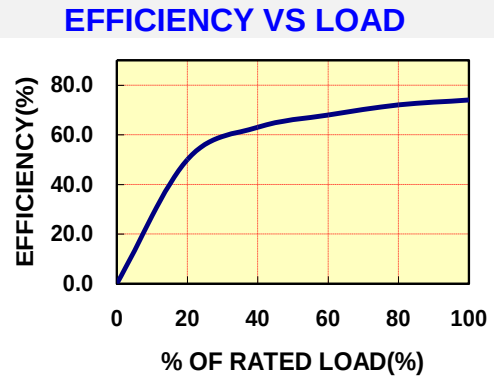
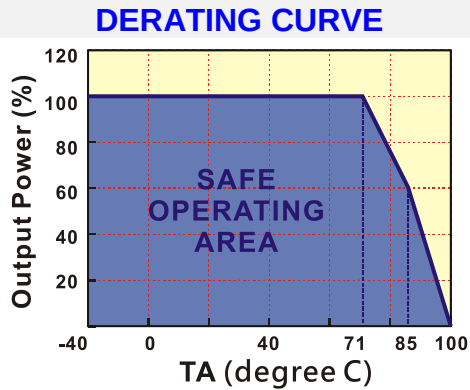


DUAL OUTPUT



● TYPICAL PERFORMANCE CURVES

Specifications typical at $T_a=25^{\circ}\text{C}$, nominal input voltage, rated output current unless otherwise specified.



● INPUT FUSE SELECTION GUIDE

4.75-5.5V	11.4-13.2V	22.8-26.4V	45.6-52.8V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
500mA Slow-Blow Type	250mA Slow-Blow Type	100mA Slow-Blow Type	60mA Slow-Blow Type

INPUT

Fuse

+Vin

-Vin

+Vout

-Vout

DC-DC CONVERTER

OUTPUT

Note: Certain applications may require the installation of external fuse in front of the input.

PR-N SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the PR-N series.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 250KHz is required.

External output capacitance is not required for operation, however it is recommended that 10uF tantalum and 0.1uF ceramic capacitance be selected for reduced system noise.

Additional output capacitance may be added for increased filtering, but should not exceed 100uF.

We Can Offer EMC-Filter According To EN55032 Class B.

Negative Outputs:

A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting -OUT as the negative output.

FOR MORE INFORMATION CALL:

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Home Page

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