

PR SERIES

1W REGULATED

DANUBE

FEATURES

- SINGLE IN LINE PACKAGE
- UP TO 1W REGULATED OUTPUT POWER
- 100% BURN IN
- EFFICIENCY UP TO 53%
- 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% max.
Load Regulation ³	+/-1% max.
Minimum Load	10% of Full Load
Short Circuit Protection	Current Limit Protection
Short Circuit Restart	Automatic
Transient Response ⁵	100uS max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +71 °C
Case Temperature	+100 °C max.
Storage Temperature	-55 °C to +125 °C
Humidity	95% max.
Cooling	Free-Air Convection

INPUT SPECIFICATIONS

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

GENERAL SPECIFICATIONS

Efficiency	50% min.
Isolation Voltage ⁴	1500 VDC min.
Isolation Resistance	10 ⁹ ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	100KHz max.
MTBF ⁶	>1,800,000 Hours
Weight	2.3g typ.
Case Material	Non-Conductive Plastic
Case Size	19.6mm*7.1mm*10.14mm
Radiated Emissions	EN55032 Class B

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 For 10 seconds.

⁵ 25% Step Load Change.

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

● SELECTION GUIDE

1W OUTPUT

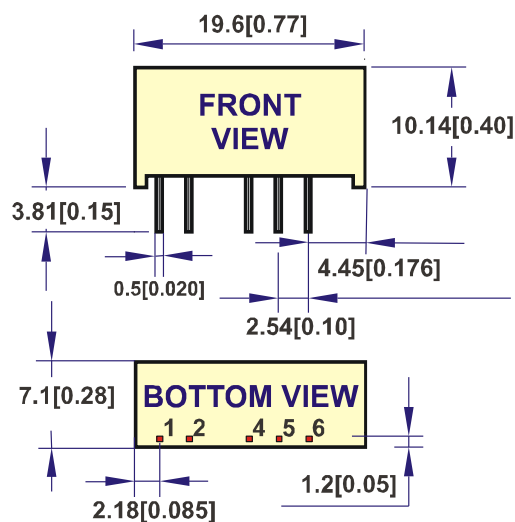
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷ CURRENT(mA)		EFF (%) ⁸	ISOLATION (VDC)	OUTPUT POWER (Watt)
				FULL LOAD	NO LOAD			
PRS-0505C	4.5-5.5	5	200	333	40	60	1500	1
PRS-0509C	4.5-5.5	9	100	315	40	57	1500	0.9
PRS-0512C	4.5-5.5	12	84	333	32	60	1500	1
PRS-0515C	4.5-5.5	15	67	333	32	60	1500	1
PRS-1205C	10.8-13.2	5	200	126	15	66	1500	1
PRS-1209C	10.8-13.2	9	100	128	14	59	1500	0.9
PRS-1212C	10.8-13.2	12	84	138	38	60	1500	1
PRS-1215C	10.8-13.2	15	67	134	15	62	1500	1
PRS-2405C	21.6-26.4	5	200	67	15	62	1500	1
PRS-2409C	21.6-26.4	9	100	65	15	58	1500	0.9
PRS-2412C	21.6-26.4	12	84	69	15	60	1500	1
PRS-2415C	21.6-26.4	15	67	69	10	60	1500	1
PRS-2424C	21.6-26.4	24	42	68	15	61	1500	1
PRS-4805C	43.2-52.8	5	200	33	13	62	1500	1
PRS-4809C	43.2-52.8	9	100	33	10	56	1500	0.9
PRS-4812C	43.2-52.8	12	84	36	10	58	1500	1
PRS-4815C	43.2-52.8	15	67	36	13	58	1500	1
PRS-0505C1	4.75-5.25	5	200	307	40	65	1500	1
PRS-0512C1	4.75-5.25	12	84	307	35	65	1500	1
PRS-0515C1	4.75-5.25	15	67	307	35	65	1500	1
PRS-1205C1	11.4-12.6	5	200	119	15	70	1500	1
PRS-1212C1	11.4-12.6	12	84	128	15	65	1500	1
PRS-1215C1	11.4-12.6	15	67	126	15	66	1500	1
PRS-2405C1	22.8-25.2	5	200	64	13	65	1500	1
PRS-2112C1	22.8-25.2	12	84	64	13	65	1500	1
PRS-2415C1	22.8-25.2	15	67	64	13	65	1500	1

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



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

NOTE :

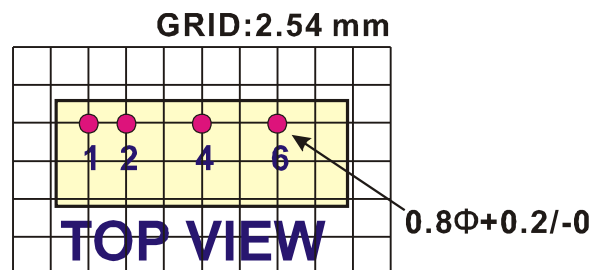
All dimensions are in mm(Inches)

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

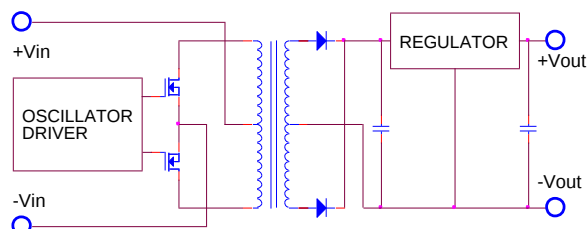
2. Pin is Tolerance .XX= ±0.05mm

3. Tolerance .X or .XX= ±0.5mm

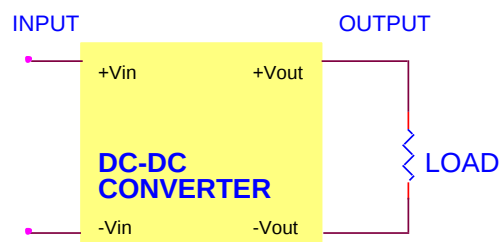
All dimensions are in mm[inches]



● SIMPLIFIED SCHEMATIC

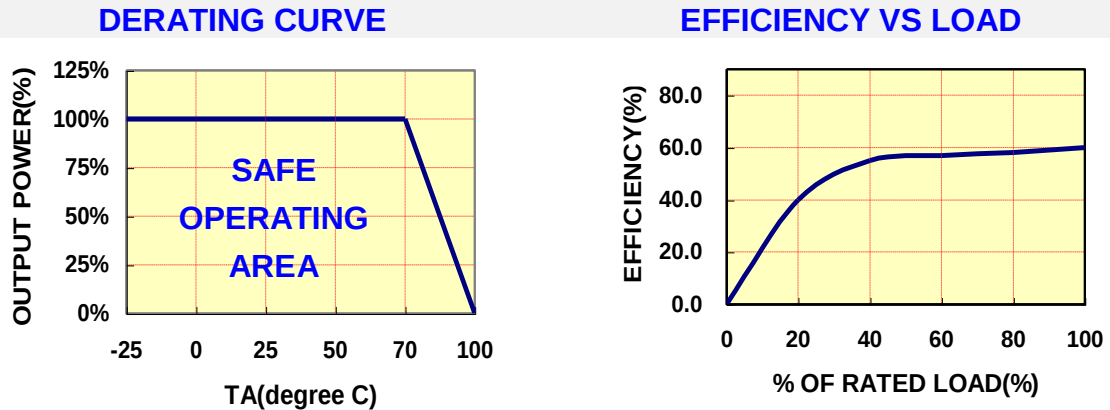


● TYPICAL APPLICATIONS



● 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

4.5-5.5V INPUT VOLTAGE(VDC)	10.8-13.2V INPUT VOLTAGE(VDC)	21.6-26.4V INPUT VOLTAGE(VDC)
500mA Slow-Blow Type	250mA Slow-Blow Type	100mA Slow-Blow Type

The diagram shows a yellow box labeled 'DC-DC CONVERTER'. On the left, there are two input terminals: '+Vin' (top) and '-Vin' (bottom). On the right, there are two output terminals: '+Vout' (top) and '-Vout' (bottom). A fuse is connected in series with the '+Vin' input line. The input side is labeled 'INPUT' and the output side is labeled 'OUTPUT'.

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

PR SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the PR 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:

Danube Enterprise Co., Ltd.

Tel: 886-7-3755165

Fax: 886-7-3755330

E-mail: danube@ms10.hinet.net

Home Page

<http://www.danube.com.tw>