

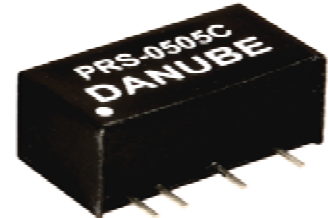
# PR SERIES

1W REGULATED

# DANUBE

## FEATURES

- SINGLE IN LINE PACKAGE
- UP TO 1W REGULATED OUTPUT POWER
- 100% BURNED 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 Setpoint Accuracy	+/-3% max	Input Voltage Range	+/-10% max
Temperature Coefficient	+/-0.05%/°C	Input Filter	Capacitor Typ
Ripple & Noise(20MHz BW) <sup>1</sup>	100mVp-p max	Protection	Fuse Recommended
Line Regulation <sup>2</sup>	+/-1% max		
Load Regulation <sup>3</sup>	+/-1% max		
Minimum Load	10% of Full Load		
Short Circuit Protection	Current Limit Protection		
Short Circuit Restart	Automatic		
Transient Response <sup>5</sup>	100uS max		

## GENERAL SPECIFICATIONS

Efficiency	50% min
Isolation Voltage <sup>4</sup>	1500 VDC min
Isolation Resistance	10 <sup>9</sup> ohms min
Isolation Capacitance	80pF max
Switching Frequency	100KHz min
MTBF <sup>6</sup>	>1,800,000 Hours
Weight	2.3g Typ
Case Material	Non-Conductive Plastic
Case Size	19.6mm*7.1mm*10.2mm
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

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

<sup>1</sup> Measured with 1uF ceramic capacitor connect to the output pins.

<sup>2</sup> High Line to Low Line.

<sup>3</sup> Load Regulation is for output load current change from 10% to 100%.

<sup>4</sup> For 10 seconds.

<sup>5</sup> 25% Step Load Change.

<sup>6</sup> MIL-HDBK-217F @25°C, Ground Benign.

● **SELECTION GUIDE**  
**1W OUTPUT**

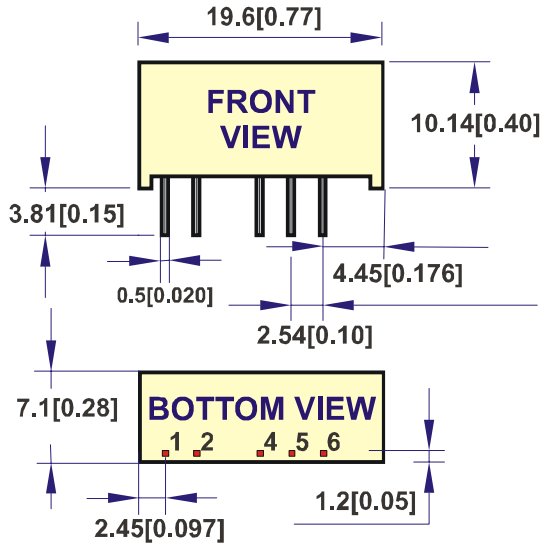
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT <sup>7</sup> CURRENT(mA)		EFF (%) <sup>8</sup>	ISOLATION (VDC)	OUTPUT POWER (Watt)
				FULL LOAD	NO LOAD			
				PRS-0505C	4.5-5.5			
PRS-0509C	4.5-5.5	9	100	315	40	57	1500	0.9
PRS-0512C	4.5-5.5	12	84	333	32	60	1500	1
PRS-0515C	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

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

<sup>7</sup> NOMINAL INPUT VOLTAGE.

<sup>8</sup> NOMINAL INPUT VOLTAGE, FULL LOAD.

## MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



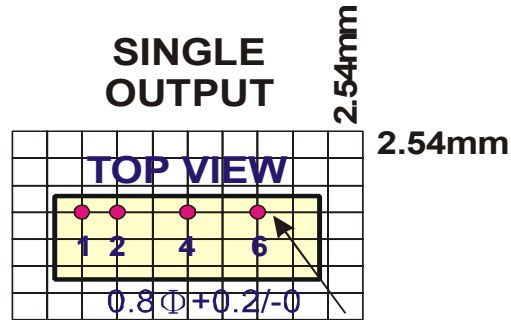
PIN	SINGLE
1	+Vin
2	-Vin
4	-Vout
5	NP
6	+Vout

NOTE: Pin Size is Tolerance  $0.50\Phi \pm 0.05\text{mm}$

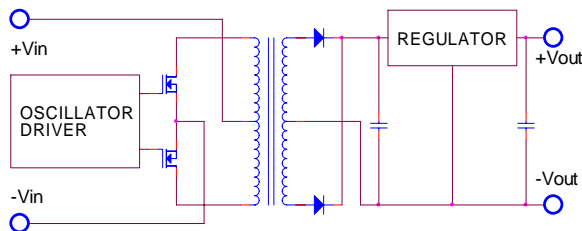
All Dimensions In mm(Inches)

Tolerance .X or .XX=  $\pm 0.5\text{mm}$

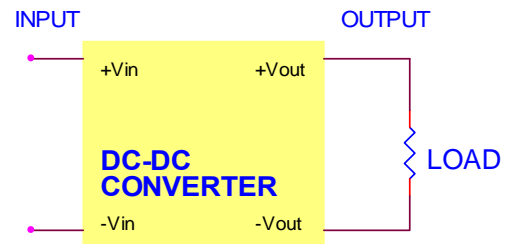
All dimensions are in mm[inches]



## SIMPLIFIED SCHEMATIC



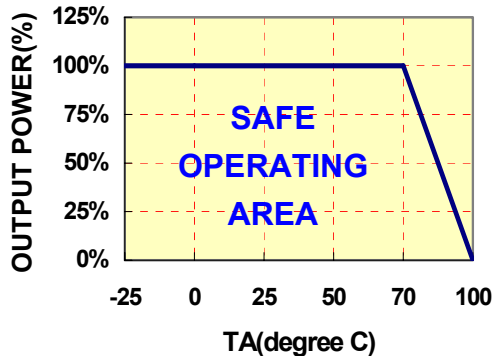
## TYPICAL APPLICATIONS



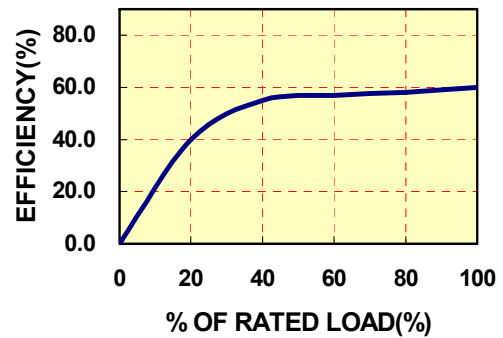
## ● TYPICAL PERFORMANCE CURVES

Specifications typical at TA=25°C, nominal input voltage , rated output current unless otherwise specified.

### DERATING CURVE



### EFFICIENCY VS LOAD



## ● 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

**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 EN55011/22 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>

# DANUBE

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**Additional Information :**

한국 총판점 : (주)디웰전자 (Diwell Electronics Co., Ltd.)

Phone : 070-8235-0820 (+82-70-8235-0820)

Fax : 031-429-0821 (+82-31-429-0821)

Homepage: [http:// www.diwell.com](http://www.diwell.com)

[http:// www.diwellshop.com](http://www.diwellshop.com)

기술 및 구매 문의 email : [expoeb2@diwell.com](mailto:expoeb2@diwell.com),  
[dsjeong@diwell.com](mailto:dsjeong@diwell.com)