

# PRD SERIES

1W REGULATED

# DANUBE

## FEATURES

- SINGLE IN LINE PACKAGE
- UP TO 1W REGULATED OUTPUT POWER
- 100% BURNED IN
- EFFICIENCY UP TO 60%
- 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
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) <sup>1</sup>	100mVp-p max
Line Regulation <sup>2</sup>	+/-2% max
Load Regulation <sup>3</sup>	+/-2% max
Minimum Load	10% of Full Load
Short Circuit Protection	Current Limit Protection
Short Circuit Restart	Automatic
Transient Response <sup>5</sup>	100uS max

## INPUT SPECIFICATIONS

Input Voltage Range	+/-10% max
Input Filter	Capacitor Typ
Protection	Fuse Recommended

## GENERAL SPECIFICATIONS

Efficiency	50% min
Isolation Voltage <sup>4</sup>	1500VDC 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

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +71 °C	Case Material	Non-Conductive Plastic
Storage Temperature	-55 °C to +125 °C	Case Size	19.6mm*7.5mm*10.2mm
Humidity	95% max	Conducted Emissions	EN55022 Class A
Cooling	Free-Air Convection	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> 1500VDC for 10 seconds

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

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

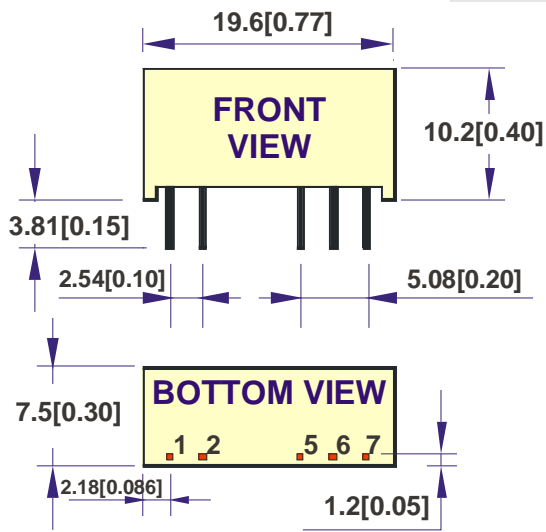
● **SELECTION GUIDE**  
**1W OUTPUT 1500VDC ISOLATION**

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)	OUTPUT POWER (Watt)
				FULL LOAD	NO LOAD			
PRD-0505G	4.5-5.5	+/-5	+/-100	350	35	57	1500	1
PRD-0512G	4.5-5.5	+/-12	+/-42	350	50	57	1500	1
PRD-0515G	4.5-5.5	+/-15	+/-34	350	60	57	1500	1
PRD-1205G	10.8-13.2	+/-5	+/-100	141	20	59	1500	1
PRD-1215G	10.8-13.2	+/-15	+/-34	134	30	62	1500	1
PRD-2405G	21.6-26.4	+/-5	+/-100	70	5	60	1500	1
PRD-2412G	21.6-26.4	+/-12	+/-42	70	40	60	1500	1

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

● **MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS**

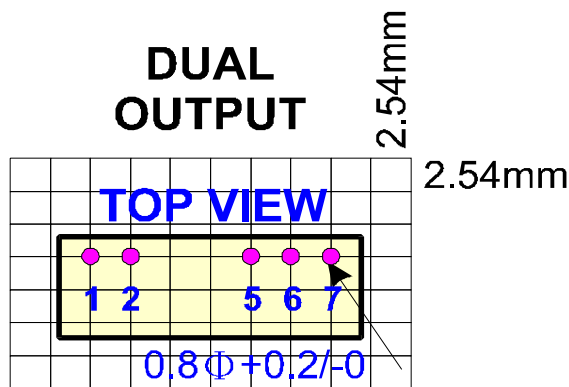
**PACKAGE "G"**



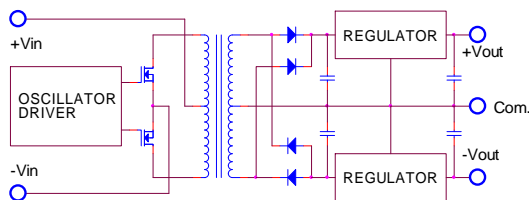
PIN	DUAL
1	+Vin
2	-Vin
5	-Vout
6	Common
7	+Vout

- NOTE : All Dimensions 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

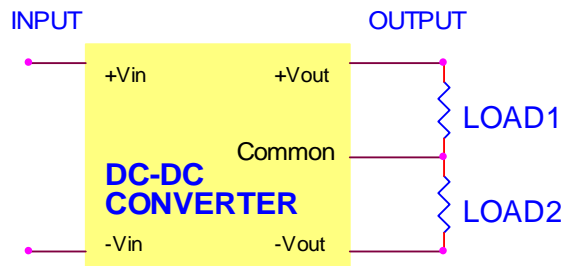
All dimensions are in mm[inches]



● **SIMPLIFIED SCHEMATIC**



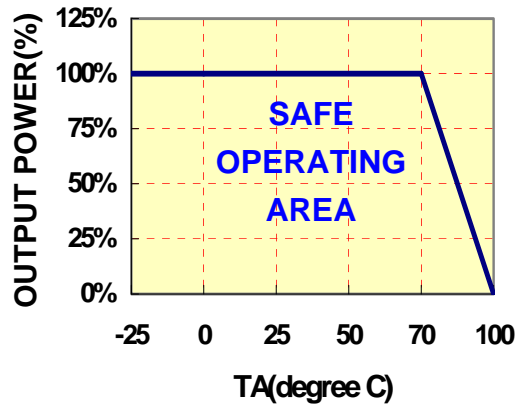
● **TYPICAL APPLICATIONS**



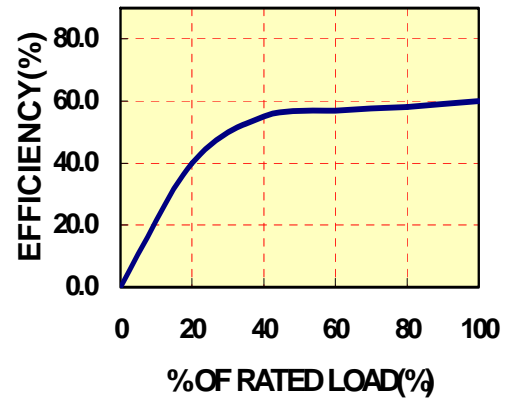
## ● TYPICAL PERFORMANCE CURVES

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

### 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.

## **PRD SERIES APPLICATION NOTES:**

### **EXTERNAL CAPACITANCE REQUIREMENTS:**

*No external capacitance is required for operation of the PRD 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>**

---

---