

# PCW SERIES

5W WIDE INPUT RANGE

# DANUBE

## FEATURES

- LEAD FREE
- 1500VDC ISOLATION
- SINGLE IN LINE PACKAGE
- UP TO 5W REGULATED OUTPUT POWER
- NO EXTERNAL COMPONENTS REQUIRED
- INTERNAL FILTERING
- 100% BURN IN
- HIGH EFFICIENCY
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- ROHS COMPLIANT
- 3 YEARS WARRANTY

CE

FC

RoHS  
COMPLIANT



## OUTPUT SPECIFICATIONS

Voltage Set-point Accuracy	+/-2% max.
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) <sup>1</sup>	150mVp-p max.
Line Regulation <sup>2</sup>	+/-0.5% max.
Load Regulation <sup>3</sup>	+/-0.5% max.
	Output : 3.3V +/-1% max.
Minimum Load	20% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Over Load Protection	150% typ.
Capacitive Load	5V:1000uF max.
	12V:470uF max.
	15V:330uF max.

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°C to 60°C
Case Temperature	+95°C max.
Storage Temperature	-55°C to +105°C
Humidity	95% max.
Cooling	Free-Air Convection

## INPUT SPECIFICATIONS

Input Voltage Range	2:1 Input Range
Input Filter	Capacitor Type
Protection	Fuse Recommended
Start up Time(Nominal Input)	10mS max.

## GENERAL SPECIFICATIONS

Efficiency	80% min.
Isolation Voltage <sup>4</sup>	1500VDC min.
Isolation Resistance	10 <sup>9</sup> ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	100 KHz min.
MTBF <sup>5</sup>	>900,000 Hours
Weight	4.8g typ.
Case Material	Non-Conductive Plastic
Case Size	21.80mm*9.20mm*11.10mm
Potting Material	Epoxy(UL94V-0)
Radiated Emissions	EN55022 Class B

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

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

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

<sup>3</sup> Load Regulation is for output load current change from 20% to 100%.

<sup>4</sup> 1500VDC for 10 seconds 3000VDC for 3 seconds.

<sup>5</sup> MIL-HDBK-217F @25°C, Ground Benign.

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● **SELECTION GUIDE**  
**5W OUTPUT**

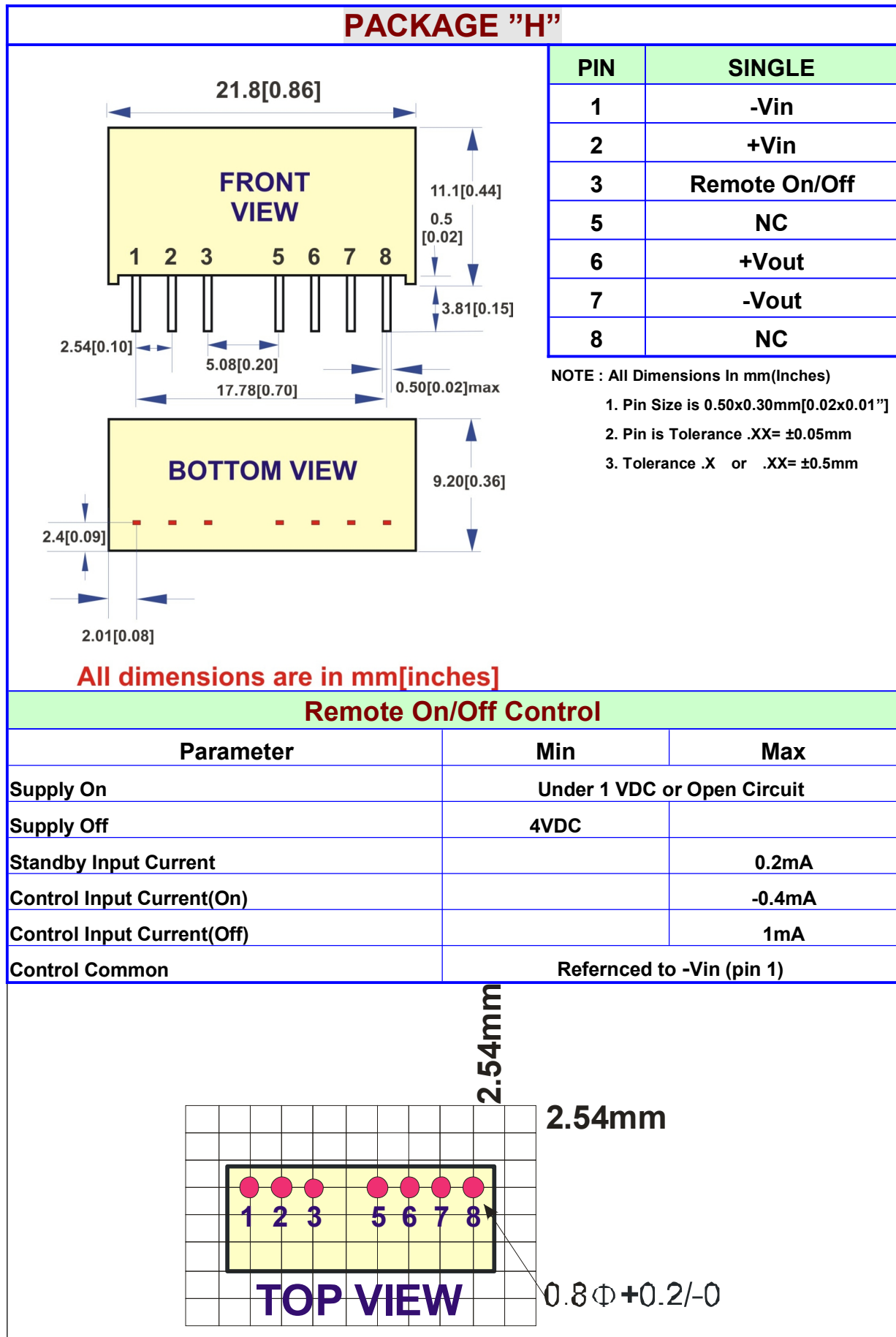
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT <sup>6</sup>		EFF (%) <sup>7</sup>	ISOLATION <sup>8</sup> (VDC)	PACKAGE
				CURRENT(mA)				
				FULL LOAD	NO LOAD			
PCWS-0505	4.5-9	5	800	1000	50	80	1500	H
PCWS-1203.3	9-18	3.3	1200	413	50	80	1500	H
PCWS-1205	9-18	5	1000	514	50	81	1500	H
PCWS-1212	9-18	12	417	491	50	85	1500	H
PCWS-1215	9-18	15	333	496	50	84	1500	H
PCWS-2403.3	18-36	3.3	1200	204	25	81	1500	H
PCWS-2405	18-36	5	1000	251	25	83	1500	H
PCWS-2412	18-36	12	417	245	25	85	1500	H
PCWS-2415	18-36	15	333	245	25	85	1500	H
PCWS-4803.3	36-75	3.3	1200	102	15	81	1500	H
PCWS-4805	36-75	5	1000	126	15	83	1500	H
PCWS-4812	36-75	12	417	123	15	85	1500	H
PCWS-4815	36-75	15	333	122	15	85	1500	H

<sup>6</sup> NOMINAL INPUT VOLTAGE.

<sup>7</sup> NOMINAL INPUT VOLTAGE, FULL LOAD.

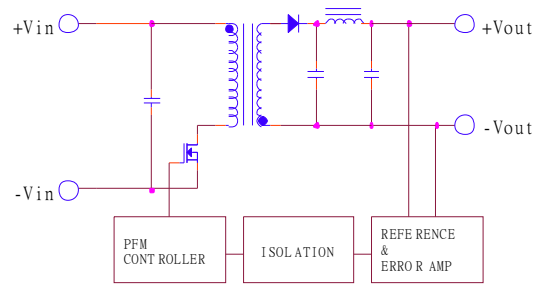
<sup>8</sup> 1500VDC for 10 seconds.

## MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



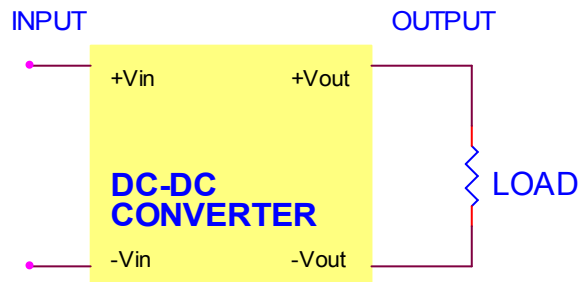
## ● SIMPLIFIED SCHEMATIC

### SINGLE OUTPUT



## ● TYPICAL APPLICATIONS

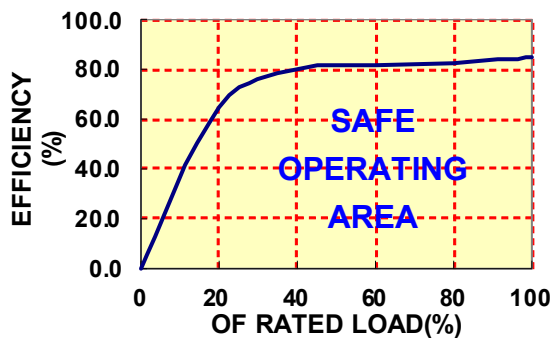
### SINGLE OUTPUT



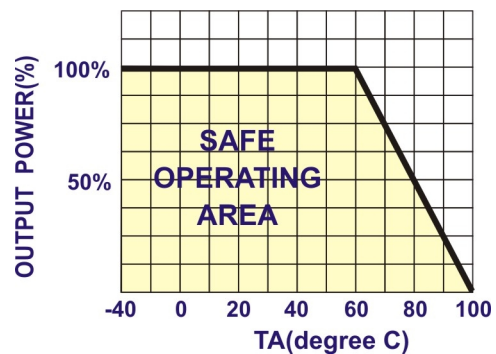
## ● TYPICAL PERFORMANCE CURVES

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

### OUTPUT LOAD VS EFFICIENCY



### TEMPERATURE DERATING



## ● INPUT FUSE SELECTION GUIDE

9-18V INPUT VOLTAGE(VDC)	18-36V INPUT VOLTAGE(VDC)	36-75V INPUT VOLTAGE(VDC)
1000mA Slow-Blow Type	600mA Slow-Blow Type	300mA Slow-Blow Type

The diagram shows a yellow box labeled "DC-DC CONVERTER". The input side has terminals for +Vin and -Vin. The output side has terminals for +Vout and -Vout. A fuse is connected to the +Vin input terminal.

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

## **PCW SERIES APPLICATION NOTES:**

### **EXTERNAL CAPACITANCE REQUIREMENTS:**

*No external capacitance is required for operation of the PCW series.*

*To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 100KHz 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 220uF.*

*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.*

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## **FOR MORE INFORMATION CALL:**

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