

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) ¹	150mVp-p max.
Line Regulation ²	+/-0.5% max.
Load Regulation ³	+/-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 ⁴	1500VDC min.
Isolation Resistance	10 ⁹ ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	100 KHz min.
MTBF ⁵	>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.

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

² High Line to Low Line.

³ Load Regulation is for output load current change from 20% to 100%.

⁴ 1500VDC for 10 seconds 3000VDC for 3 seconds.

⁵ MIL-HDBK-217F @25 °C , Ground Benign.

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● **SELECTION GUIDE**
5W OUTPUT

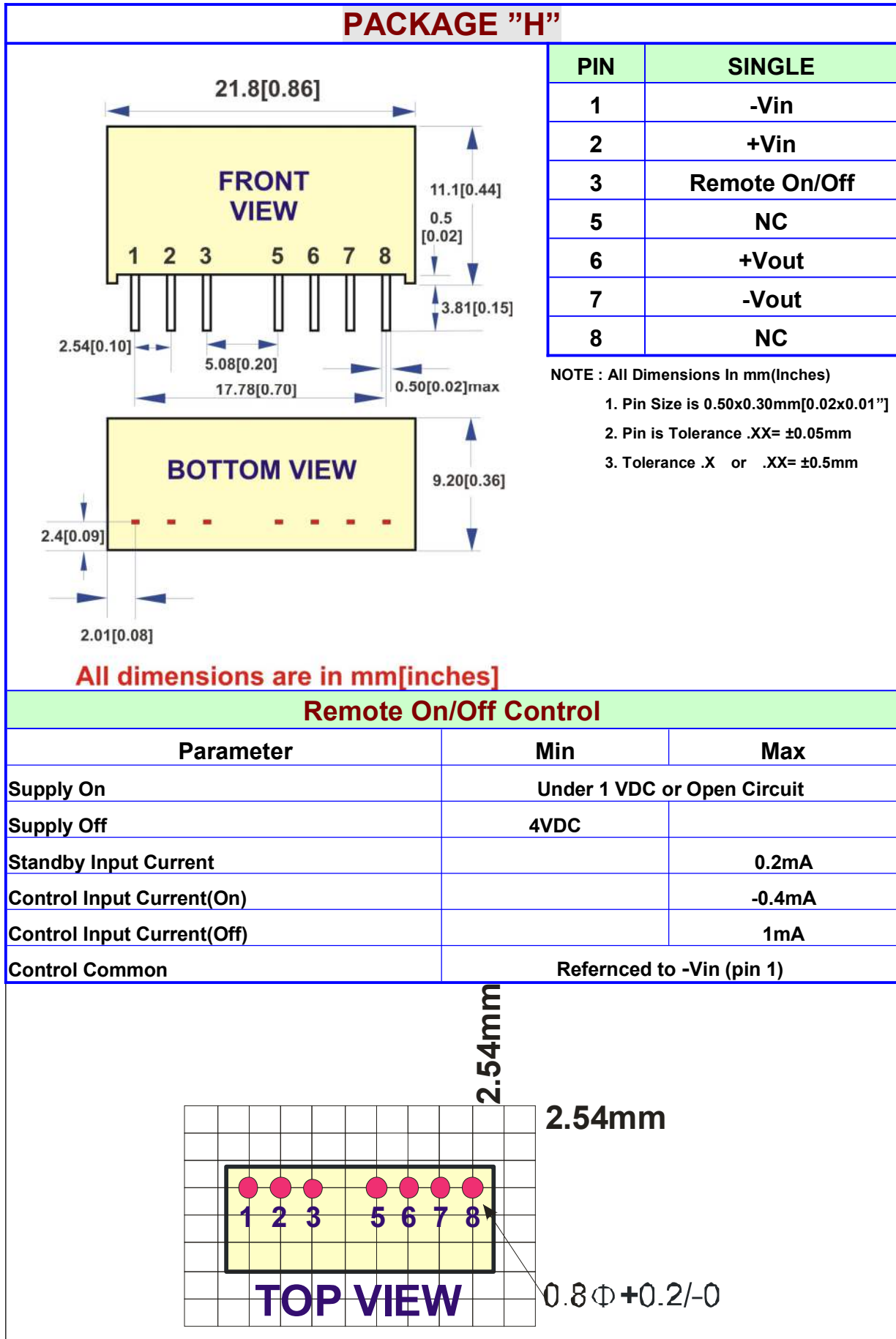
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁶		EFF (%) ⁷	ISOLATION ⁸ (VDC)	PACKAGE
				CURRENT(mA)				
				FULL LOAD	NO LOAD			
PCWS-0505	4.5-9	5	800	1000	50	80	1500	H
PCWS-1203.3	9-18	3.3	1200	413	50	80	1500	H
PCWS-1205	9-18	5	1000	514	50	81	1500	H
PCWS-1212	9-18	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

⁶ NOMINAL INPUT VOLTAGE.

⁷ NOMINAL INPUT VOLTAGE, FULL LOAD.

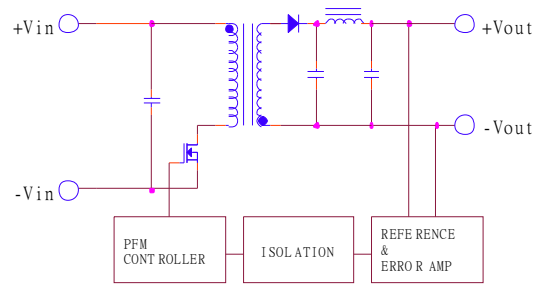
⁸ 1500VDC for 10 seconds.

● MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



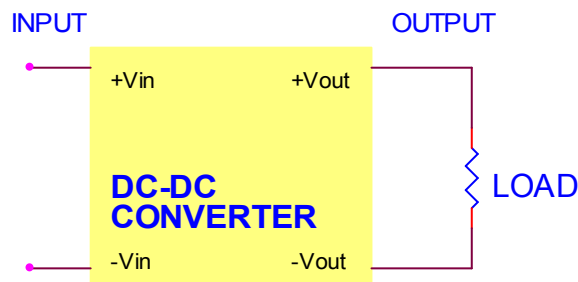
● SIMPLIFIED SCHEMATIC

SINGLE OUTPUT



● TYPICAL APPLICATIONS

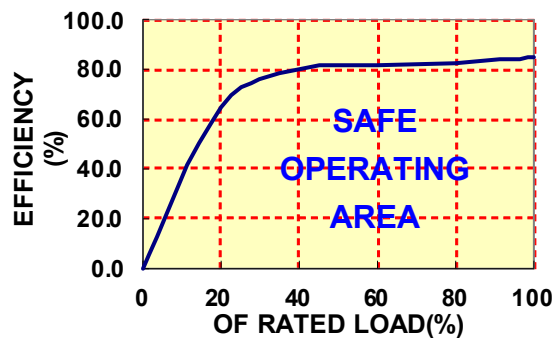
SINGLE OUTPUT



● TYPICAL PERFORMANCE CURVES

Specifications typical at $T_A=25^\circ\text{C}$, 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 rectangular block representing the DC-DC converter. On the left side, there are two input terminals labeled +Vin and -Vin. On the right side, there are two output terminals labeled +Vout and -Vout. A fuse is connected in series with 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.

FOR MORE INFORMATION CALL:

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Home Page

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