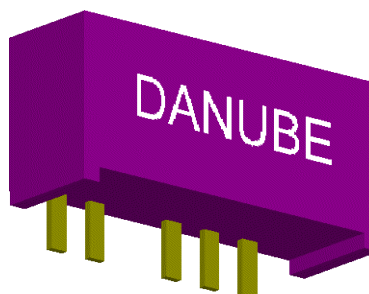


# DC-DC Converter UNIT

PU-3W SERIES (3 W UNREGULATED)

## FEATURES

- Single in line package
- 3W Unregulated output power
- 100% Burned in
- High Efficiency
- Internal SMD Technology
- Low cost
- No heatsink required
- UL 94V-0 Package material
- Custom solutions available
- RoHS compliant
- 3 Years warranty



## OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.05%/ °C
Ripple & Noise (20MHz BW) <sup>1</sup>	100mVp-p max
Line Regulation <sup>2</sup>	+/-1.2% max
Load Regulation <sup>3</sup>	+/-8% max
Minimum Load	10% of Full Load
Short Circuit Protection	Momentary

## INPUT SPECIFICATIONS

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

## GENERAL SPECIFICATIONS

Efficiency	80%-87%
Isolation Voltage <sup>4</sup>	3000Vdc min
Isolation Resistance	Standard Models 10 <sup>9</sup> ohms min
Isolation Capacitance	80pF max
Switching Frequency	60 KHz min
MTBF <sup>6</sup>	>1.800,000 Hours
Weight	2.9g Typ
Case Material	Non-Conductive Plastic
Case Size	19.6mm*7.1mm*10.2mm

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C
Humidity	95% max
Cooling	Free-Air Convection

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] Line Regulation is for a 1.0% change in input Voltage.  
 [3] Load Regulation is for output load current change from 20% to 100%.  
 [4] 3000Vdc for 3 seconds.  
 [5] MIL-HDBK-217F @25 °C , Ground Benign

### Power Systems – The Power Solution

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 Email: [Info@Power-Systems.de](mailto:Info@Power-Systems.de)

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## •SELECTION GUIDE(1) 2W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT <sup>[6]</sup> CURRENT(mA)		EFF (%) <sup>[7]</sup>	ISOLATION (VDC)	PACKAGE
				Full load	No load			
PUS-0505G3	5	5	600	731	68	82	3000	G
PUS-0509G3	5	9	333	706	68	85	3000	G
PUS-0512G3	5	12	250	706	68	85	3000	G
PUS-0515G3	5	15	200	698	68	86	3000	G
PUS-1205G3	12	5	600	305	28	82	3000	G
PUS-1209G3	12	9	333	294	28	85	3000	G
PUS-1212G3	12	12	250	294	28	85	3000	G
PUS-1215G3	12	15	200	287	28	87	3000	G
PUS-2405G3	24	5	600	152	15	82	3000	G
PUS-2409G3	24	9	333	147	15	85	3000	G
PUS-2412G3	24	12	250	147	15	85	3000	G
PUS-2415G3	24	15	200	144	15	87	3000	G

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

## ORDERING INFORMATION:

Model Name	Difference
PUS-x1x2Gx3	P = Series Name
	U = Unregulated
	S = Single output
	x1 = Input voltage (05 : 12 : 24)
	x2 = Output voltage (03.3 : 05 : 12 : 15)
	G = Difference output voltage's pins. ** Detailed data please reference the appendix A file.*
	X3 = type of output power
	zzz = 0~9, A~Z or blank for market purpose

[6] NOMINAL INPUT VOLTAGE.  
[7] NOMINAL INPUT VOLTAGE, FULL LOAD.

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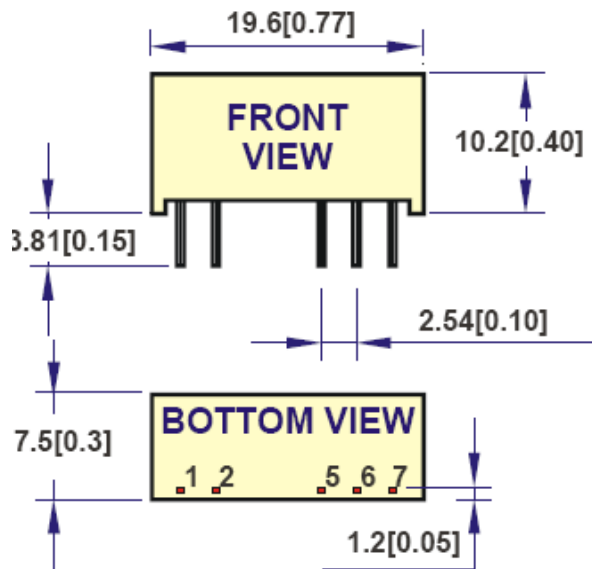
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# DC-DC Converter UNIT

PU-3W SERIES (3 W UNREGULATED)

## MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

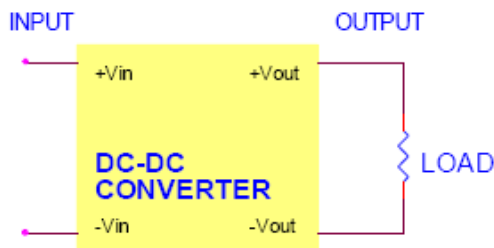
### PACKAGE „G“



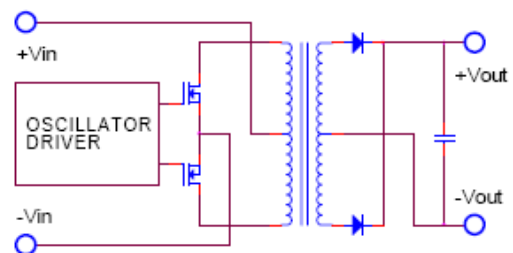
PIN	SINGLE
1	+Vin
2	-Vin
4	-Vout
5	NP
6	+Vout

All dimensions are in mm[inches]

## SIMPLIFIED SCHEMATIC



## TYPICAL APPLICATIONS



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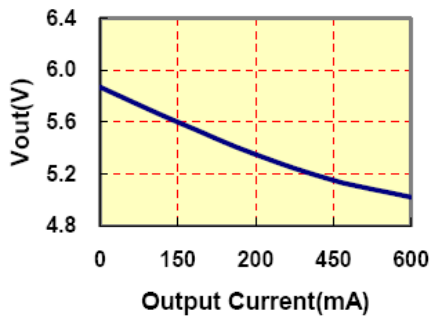
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# DC-DC Converter UNIT

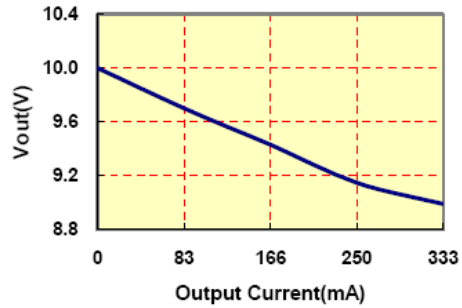
PU-3W SERIES (3 W UNREGULATED)

## TYPICAL PERFORMANCE CURVES

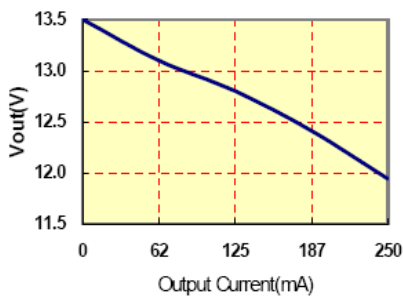
VOUT VS LOAD(5Vout Models)



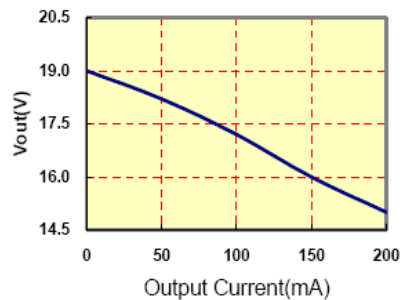
VOUT VS LOAD(9Vout Models)



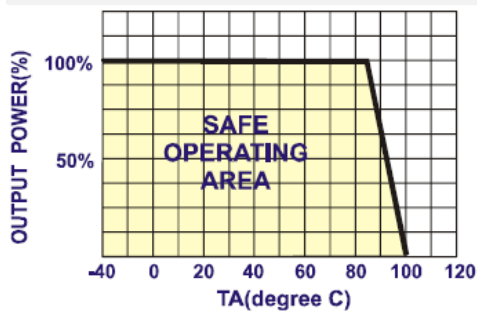
VOUT VS LOAD(12Vout Models)



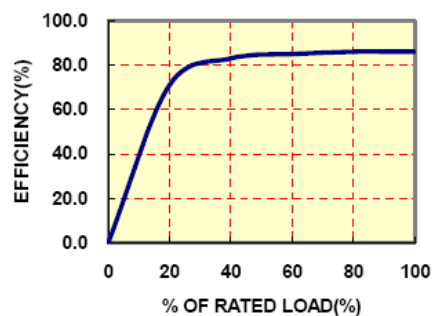
VOUT VS LOAD(15Vout Models)



DERATING CURVES



EFFICIENCY VS LOAD



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# DC-DC Converter UNIT

PU-3W SERIES (3 W UNREGULATED)

## 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)
1750mA Slow-Blow Type	750mA Slow-Blow Type	375mA Slow-Blow Type

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

## PU-G3 SERIES APPLICATION NOTES: EXTERNAL CAPACITANCE REQUIREMENTS:

Output filtering is required for operation. A minimum of 10uF is needed. Output capacitance may be increased for additional filtering, not to exceed 220uF.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 250 KHz is required.

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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