

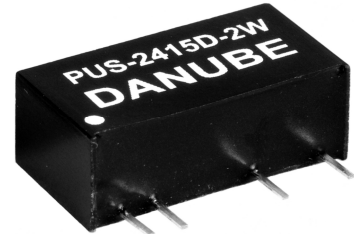
PU-2W SERIES

2W UNREGULATED

DANUBE

FEATURES

- SINGLE IN LINE PACKAGE
- 2W UNREGULATED OUTPUT POWER
- 100% BURN 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 Set-point Accuracy	+/-2% max
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max
Line Regulation ²	+/-1.2% max
Load Regulation ³	+/-8% max
Minimum Load	10% of Full Load
Short Circuit Protection	Momentary

INPUT SPECIFICATIONS

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

GENERAL SPECIFICATIONS

Efficiency	70%-85%	
Isolation Voltage ⁴	1500 VDC min	Standard Models
	3000 VDC min	Suffix "D" Models
Isolation Resistance	10 ⁹ ohms min	
Isolation Capacitance	80pF max	
Switching Frequency	100KHz min	
MTBF ⁵	>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 B	

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 °C to +71 °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 1500VDC for 10 seconds, 3000VDC for 3 seconds.

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

● **SELECTION GUIDE(1)**
2W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁶ CURRENT(mA)		EFF (%) ⁷	ISOLATION (VDC)	PACKAGE
				FULL LOAD	NO LOAD			
				PUS-03.305-2W	3.3			
PUS-03.324-2W	3.3	24	84	782	65	78	1500	C
PUS-0503.3-2W	5	3.3	500	452	60	73	1500	C
PUS-0505-2W	5	5	400	520	60	77	1500	C
PUS-0509-2W	5	9	222	506	60	79	1500	C
PUS-0512-2W	5	12	167	500	60	80	1500	C
PUS-0515-2W	5	15	133	488	60	82	1500	C
PUD-03.315-2W	3.3	+/-15	+/-67	740	65	82	1500	C
PUD-0505-2W	5	+/-5	+/-200	488	60	82	1500	C
PUD-0512-2W	5	+/-12	+/-84	500	60	80	1500	C
PUD-0515-2W	5	+/-15	+/-67	488	60	82	1500	C
PUD-0524-2W	5	+/-24	+/-42	504	60	79	1500	C
PUS-1203.3-2W	12	3.3	500	185	15	74	1500	C
PUS-1205-2W	12	5	400	214	15	78	1500	C
PUS-1209-2W	12	9	222	214	15	78	1500	C
PUS-1212-2W	12	12	167	200	15	83	1500	C
PUS-1215-2W	12	15	133	196	15	85	1500	C
PUD-1205-2W	12	+/-5	+/-200	214	15	78	1500	C
PUD-1212-2W	12	+/-12	+/-84	200	17	83	1500	C
PUD-1215-2W	12	+/-15	+/-67	196	15	85	1500	C
PUS-2403.3-2W	24	3.3	500	92	15	74	1500	C
PUS-2405-2W	24	5	400	107	15	78	1500	C
PUS-2409-2W	24	9	222	107	15	78	1500	C
PUS-2412-2W	24	12	167	104	15	80	1500	C
PUS-2415-2W	24	15	133	101	15	83	1500	C
PUD-2405-2W	24	+/-5	+/-200	107	15	78	1500	C
PUD-2412-2W	24	+/-12	+/-84	103	15	81	1500	C
PUD-2415-2W	24	+/-15	+/-67	103	15	81	1500	C

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

ORDERING INFORMATION:

FOR EXAMPLE: PUS-**-2W(2W SINGLE OUTPUT)**

PUD-**-2W(2W DUAL OUTPUT)**

⁶ NOMINAL INPUT VOLTAGE.

⁷ NOMINAL INPUT VOLTAGE, FULL LOAD.

● SELECTION GUIDE(2) 2W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁸		EFF (%) ⁹	ISOLATION (VDC)	PACKAGE
				CURRENT(mA)				
				FULL LOAD	NO LOAD			
PUS-0503.3D-2W	5	3.3	500	452	60	73	3000	D
PUS-0505D-2W	5	5	400	520	60	77	3000	D
PUS-0509D-2W	5	9	222	510	60	78	3000	D
PUS-0512D-2W	5	12	167	500	60	80	3000	D
PUS-0515D-2W	5	15	133	492	60	81	3000	D
PUD-0505D-2W	5	+/-5	+/-200	520	60	77	3000	D
PUD-0509D-2W	5	+/-9	+/-111	512	60	78	3000	D
PUD-0512D-2W	5	+/-12	+/-84	500	60	80	3000	D
PUD-0515D-2W	5	+/-15	+/-67	488	60	82	3000	D
PUS-1203.3D-2W	12	3.3	500	185	15	74	3000	D
PUS-1205D-2W	12	5	400	210	15	79	3000	D
PUS-1209D-2W	12	9	222	210	15	79	3000	D
PUS-1212D-2W	12	12	167	205	15	81	3000	D
PUS-1215D-2W	12	15	133	200	15	83	3000	D
PUD-1205D-2W	12	+/-5	+/-200	214	15	78	3000	D
PUD-1212D-2W	12	+/-12	+/-84	203	15	82	3000	D
PUD-1215D-2W	12	+/-15	+/-67	200	15	83	3000	D
PUD-1218D-2W	12	+/-18	+/-55	199	20	83	3000	D
PUS-2403.3D-2W	24	3.3	500	92	15	74	3000	D
PUS-2405D-2W	24	5	400	108	15	77	3000	D
PUS-2409D-2W	24	9	222	108	15	77	3000	D
PUS-2412D-2W	24	12	167	104	15	80	3000	D
PUS-2415D-2W	24	15	133	102	15	82	3000	D
PUD-2405D-2W	24	+/-5	+/-200	107	15	78	3000	D
PUD-2412D-2W	24	+/-12	+/-84	103	15	81	3000	D
PUD-2415D-2W	24	+/-15	+/-67	102	15	81	3000	D

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

ORDERING INFORMATION:

FOR EXAMPLE: PUS-**D-2W(2W SINGLE OUTPUT)**

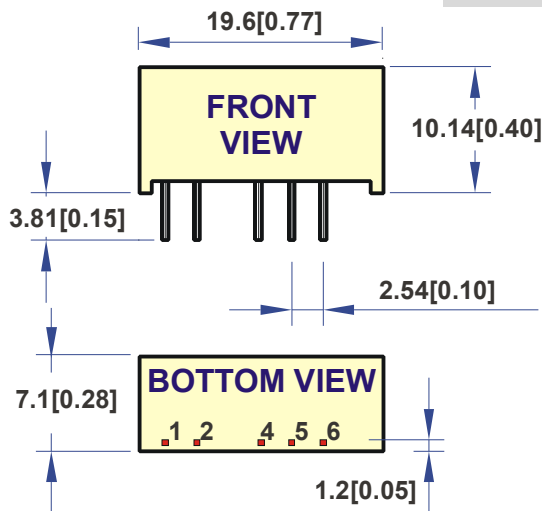
PUD-**D-2W(2W DUAL OUTPUT)**

⁸ NOMINAL INPUT VOLTAGE.

⁹ NOMINAL INPUT VOLTAGE, FULL LOAD.

MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

PACKAGE "C"



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

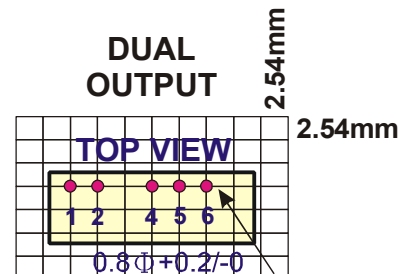
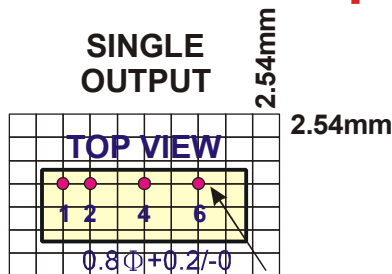
NOTE : All Dimensions In mm(Inches)

1. Pin Size is 0.50x0.30mm[0.02x0.01"]

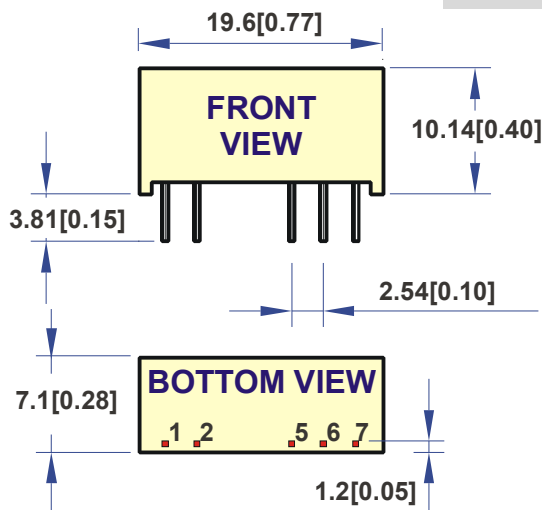
2. Pin is Tolerance .XX= ±0.05mm

3. Tolerance .X or .XX= ±0.5mm

All dimensions are in mm[inches]



PACKAGE "D"



PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	NP	COMMON
7	+Vout	+Vout

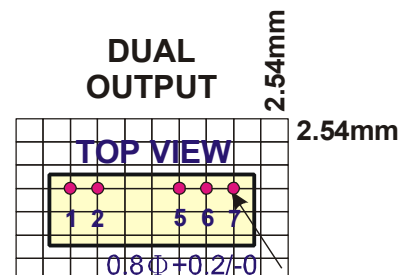
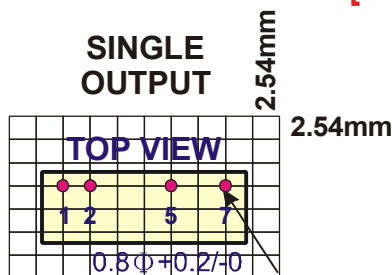
NOTE : All Dimensions In mm(Inches)

1. Pin Size is 0.50x0.30mm[0.02x0.01"]

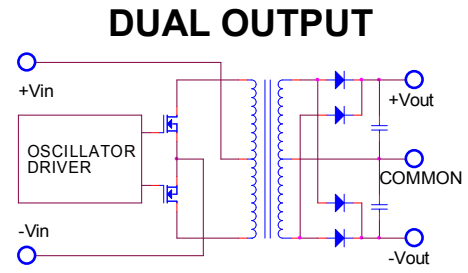
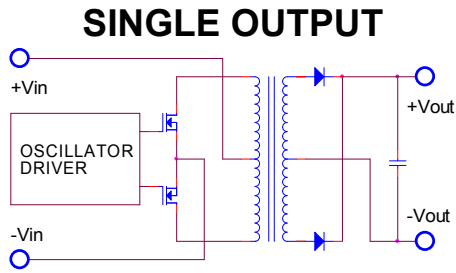
2. Pin is Tolerance .XX= ±0.05mm

3. Tolerance .X or .XX= ±0.5mm

All dimensions are in mm[inches]

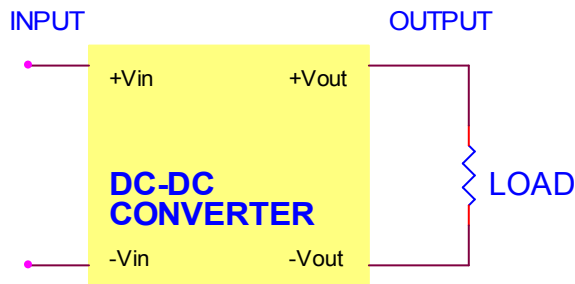


● SIMPLIFIED SCHEMATIC

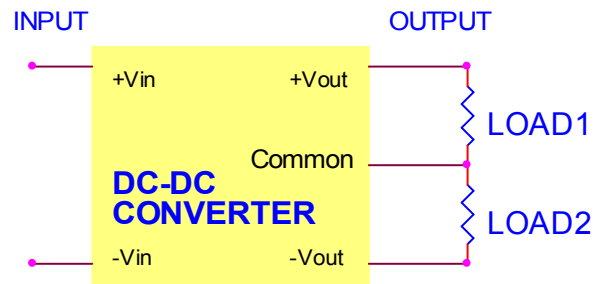


● TYPICAL APPLICATIONS

SINGLE OUTPUT



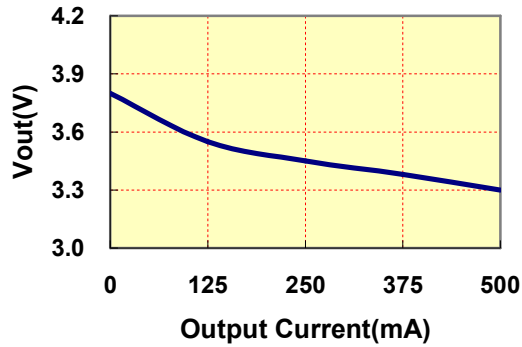
DUAL OUTPUT



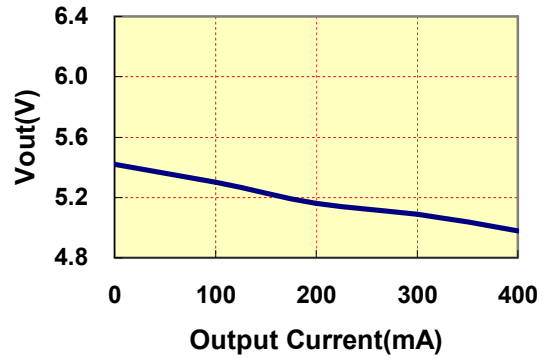
● TYPICAL PERFORMANCE CURVES

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

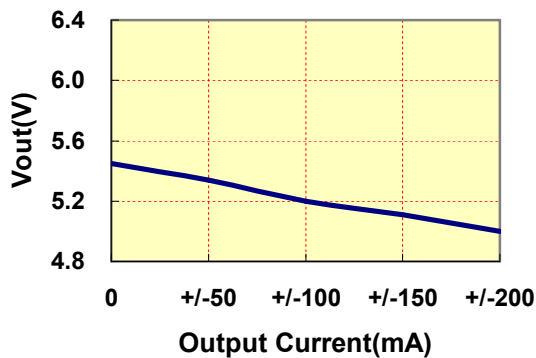
VOUT VS LOAD(3.3Vout Models)



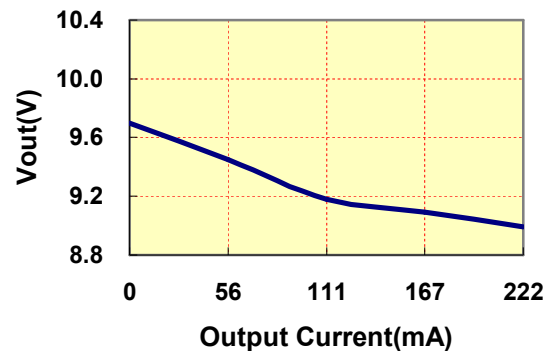
VOUT VS LOAD(5Vout Models)



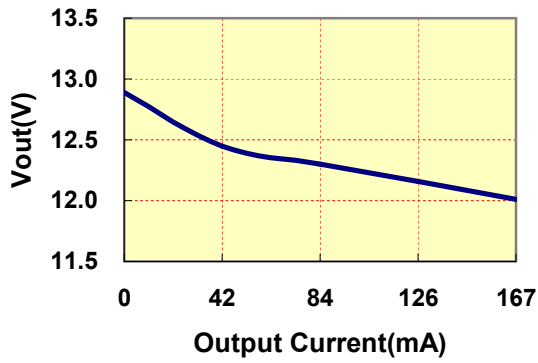
VOUT VS LOAD(+/- 5Vout Models)



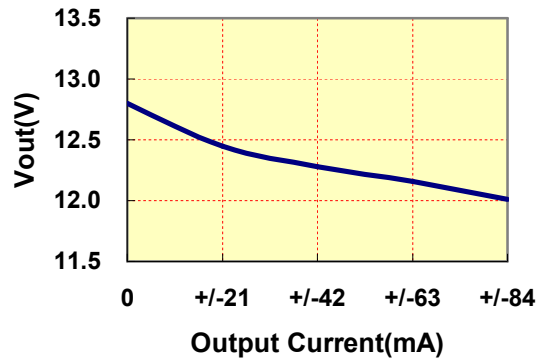
VOUT VS LOAD(9Vout Models)



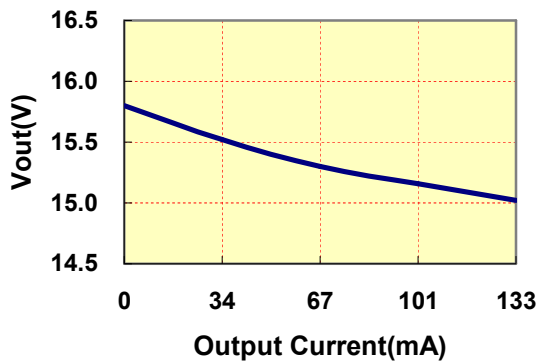
VOUT VS LOAD(12Vout Models)



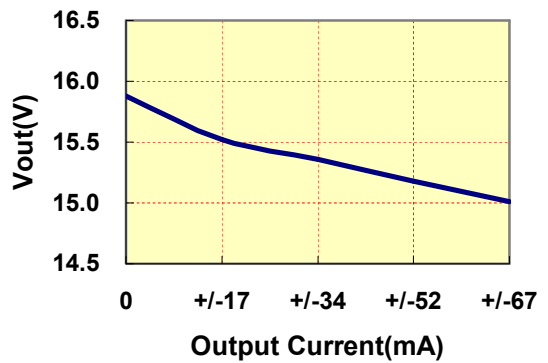
VOUT VS LOAD(+/- 12Vout Models)



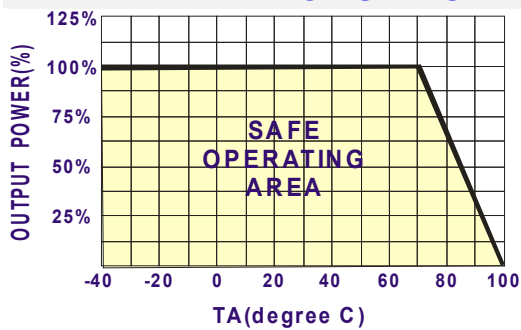
VOUT VS LOAD(15Vout Models)



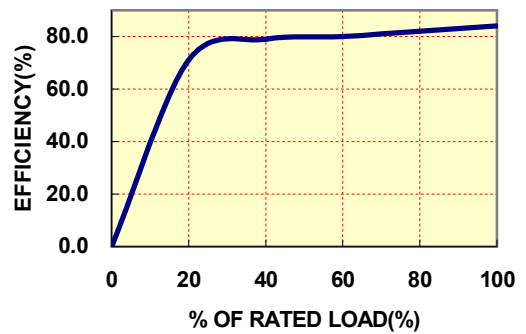
VOUT VS LOAD(+/- 15Vout Models)



DERATING CURVES



EFFICIENCY VS LOAD



● INPUT FUSE SELECTION GUIDE

2.97-3.63V	4.5-5.5V	10.8-13.2V	21.6-26.4V
INPUT VOLTAGE (VDC)	INPUT VOLTAGE (VDC)	INPUT VOLTAGE (VDC)	INPUT VOLTAGE (VDC)
1200mA Slow-Blow Type	800mA Slow-Blow Type	300mA Slow-Blow Type	170mA Slow-Blow Type

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

PU-2W SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

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

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

FOR MORE INFORMATION CALL:

Danube Enterprise Co., Ltd.

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Fax: 886-7-3755330

E-mail: danube@ms10.hinet.net

Home Page

<http://www.danube.com.tw>

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