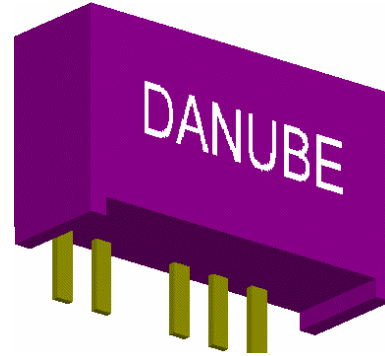


FEATURES

- 1000VDC-3000VDC ISOLATION
- EFFICIENCY UP TO 83%
- INTERNAL SMD TECHNOLOGY
- LOW COST
- NO HEATSINK REQUIRED
- 1W UNREGULATED OUTPUT POWER
- SINGLE IN LINE PACKAGE
- 100% BURNED IN
- MTBF > 2,000,000 HOURS



● OUTPUT SPECIFICATIONS

| | |
|------------------------------|--------------|
| Voltage Setpoint Accuracy | +/-2% max |
| Temperature Coefficient | +/-0.03%/ °C |
| Ripple & Noise (20MHz BW) | 100mVp-p max |
| Line Regulation ¹ | +/-1.2% max |
| Load Regulation ² | +/-8% max |
| Short Circuit Protection | Momentary |

● ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------|---------------------|
| Operating Temperature | -25 °C to +71 °C |
| Storage Temperature | -55 °C to +125 °C |
| Cooling | Free-Air Convection |

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

● INPUT SPECIFICATIONS

| | |
|---------------------|----------------|
| Input Voltage Range | +/-10% max |
| Input Filter | Capacitor Type |

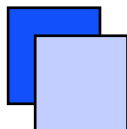
● GENERAL SPECIFICATIONS

| | |
|--------------------------------|--|
| Efficiency | 70%-83% |
| Isolation Voltage ³ | 1000-3000 VDC min |
| Isolation Resistance | 10 ⁹ ohms min |
| Switching Frequency | 100 KHz min |
| Isolation Capacitance | 80pF max |
| MTBF | 2,000,000 Hours |
| Weight | 2.1g Typ |
| Case Material | Non-Conductive Plastic |
| Case Size | 19.6mm*6.1mm*10.2mm 19.6mm*7.1mm*10.2mm |

¹ Line Regulation is for a 1.0% change in input Voltage.

² Load Regulation is for output load current change from 20% to 100%.

³ For 10 seconds



DC-DC Converter UNIT

PU Series (1W UNREGULATED DC-DC CONVERTER)

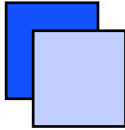
● SELECTION GUIDE (1) 1W 1000VDC ISOLATION

| MODEL NUMBER | INPUT VOLTAGE (VDC) | OUTPUT VOLTAGE (VDC) | OUTPUT CURRENT (mA) | INPUT CURRENT(mA) | | EFF (%) | ISOLATION (VDC) | PACKAGE |
|-----------------------|---------------------|----------------------|---------------------|-----------------------|---------|---------|-----------------|-------------|
| | | | | FULL LOAD | NO LOAD | | | |
| | | | | PUS-0505(A or B or E) | 5 | | | |
| PUS-0509(A or B or E) | 5 | 9 | 111 | 257 | 25 | 78 | 1000 | A or B or E |
| PUS-0512(A or B or E) | 5 | 12 | 84 | 253 | 26 | 79 | 1000 | A or B or E |
| PUS-0515(A or B or E) | 5 | 15 | 67 | 253 | 28 | 79 | 1000 | A or B or E |
| PUD-0505(A or B or E) | 5 | +/-5 | +/-100 | 274 | 21 | 73 | 1000 | A or B or E |
| PUD-0512(A or B or E) | 5 | +/-12 | +/-42 | 253 | 28 | 79 | 1000 | A or B or E |
| PUD-0515(A or B or E) | 5 | +/-15 | +/-34 | 253 | 28 | 79 | 1000 | A or B or E |
| PUS-1205(A or B or E) | 12 | 5 | 200 | 112 | 11 | 74 | 1000 | A or B or E |
| PUS-1212(A or B or E) | 12 | 12 | 84 | 102 | 10 | 82 | 1000 | A or B or E |
| PUS-1215(A or B or E) | 12 | 15 | 67 | 102 | 12 | 82 | 1000 | A or B or E |
| PUD-1205(A or B or E) | 12 | +/-5 | +/-100 | 112 | 11 | 74 | 1000 | A or B or E |
| PUD-1212(A or B or E) | 12 | +/-12 | +/-42 | 105 | 13 | 79 | 1000 | A or B or E |
| PUD-1215(A or B or E) | 12 | +/-15 | +/-34 | 101 | 10 | 83 | 1000 | A or B or E |
| PUS-2405C | 24 | 5 | 200 | 57 | 9 | 73 | 1000 | C |
| PUS-2412C | 24 | 12 | 84 | 54 | 8 | 77 | 1000 | C |
| PUS-2415C | 24 | 15 | 67 | 52 | 7 | 80 | 1000 | C |
| PUD-2405C | 24 | +/-5 | +/-100 | 57 | 9 | 73 | 1000 | C |
| PUD-2412C | 24 | +/-12 | +/-42 | 54 | 8 | 77 | 1000 | C |
| PUD-2415C | 24 | +/-15 | +/-34 | 52 | 7 | 80 | 1000 | C |

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

ORDERING INFORMATION:

FOR EXAMPLE: PUS-****A(SINGLE OUTPUT A PACKAGE)
 PUD-****A(DUAL OUTPUT A PACKAGE)
 PUS-****B(SINGLE OUTPUT B PACKAGE)
 PUD-****B(DUAL OUTPUT B PACKAGE)



DC-DC Converter UNIT

PU Series (1W UNREGULATED DC-DC CONVERTER)

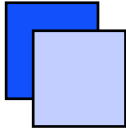
● SELECTION GUIDE (2) 1W 3000VDC ISOLATION

| MODEL NUMBER | INPUT VOLTAGE (VDC) | OUTPUT VOLTAGE (VDC) | OUTPUT CURRENT (mA) | INPUT CURRENT(mA) | | EFF (%) | ISOLATION (VDC) | PACKAGE |
|--------------|---------------------|----------------------|---------------------|-------------------|---------|---------|-----------------|---------|
| | | | | FULL LOAD | NO LOAD | | | |
| | | | | PUS-0505-3K | 5 | | | |
| PUS-0512-3K | 5 | 12 | 84 | 255 | 28 | 78 | 3000 | B |
| PUS-0515-3K | 5 | 15 | 67 | 253 | 28 | 79 | 3000 | B |
| PUD-0505-3K | 5 | +/-5 | +/-100 | 274 | 21 | 73 | 3000 | B |
| PUD-0512-3K | 5 | +/-12 | +/-42 | 253 | 28 | 79 | 3000 | B |
| PUD-0515-3K | 5 | +/-15 | +/-34 | 253 | 28 | 79 | 3000 | B |
| PUS-1205-3K | 12 | 5 | 200 | 112 | 11 | 74 | 3000 | B |
| PUS-1212-3K | 12 | 12 | 84 | 102 | 10 | 82 | 3000 | B |
| PUS-1215-3K | 12 | 15 | 67 | 100 | 11 | 83 | 3000 | B |
| PUD-1205-3K | 12 | +/-5 | +/-100 | 112 | 11 | 74 | 3000 | B |
| PUD-1212-3K | 12 | +/-12 | +/-42 | 101 | 10 | 83 | 3000 | B |
| PUD-1215-3K | 12 | +/-15 | +/-34 | 101 | 10 | 83 | 3000 | B |
| PUS-2405-3K | 24 | 5 | 200 | 57 | 9 | 73 | 3000 | D |
| PUS-2412-3K | 24 | 12 | 84 | 54 | 8 | 77 | 3000 | D |
| PUS-2415-3K | 24 | 15 | 67 | 52 | 7 | 80 | 3000 | D |
| PUD-2405-3K | 24 | +/-5 | +/-100 | 57 | 9 | 73 | 3000 | D |
| PUD-2412-3K | 24 | +/-12 | +/-42 | 54 | 8 | 77 | 3000 | D |
| PUD-2415-3K | 24 | +/-15 | +/-34 | 52 | 7 | 80 | 3000 | D |

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

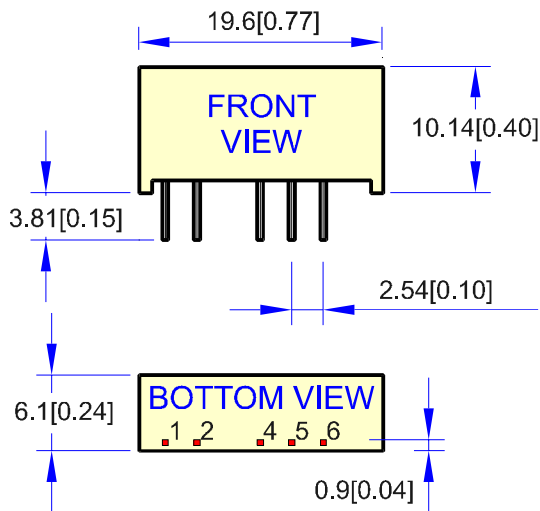
ORDERING INFORMATION:

FOR EXAMPLE: PUS-****-3K(SINGLE OUTPUT 3000V ISOLATION)
PUD-****-3K(DUAL OUTPUT 3000V ISOLATION)



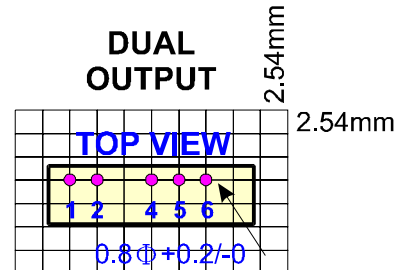
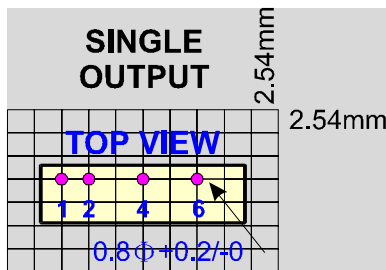
MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

PACKAGE "A"

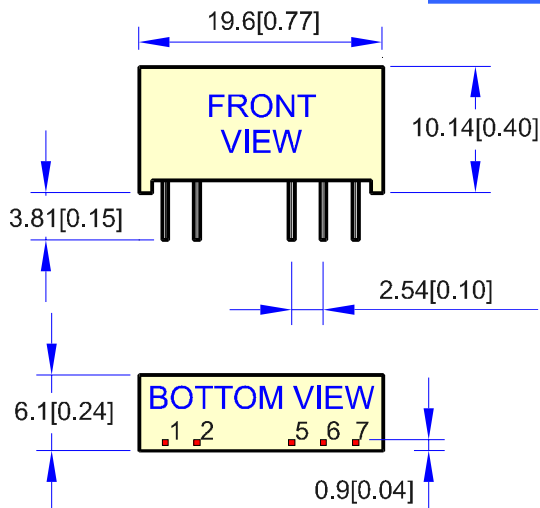


| PIN | SINGLE | DUAL |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | -Vout | -Vout |
| 5 | NP | COMMON |
| 6 | +Vout | +Vout |

All dimensions are in mm[inches]

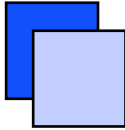


PACKAGE "B"



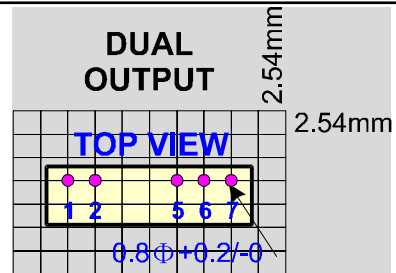
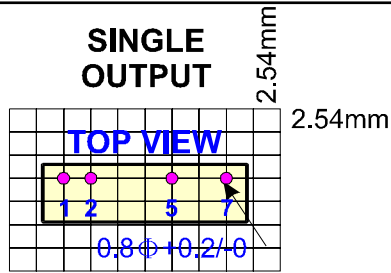
| PIN | SINGLE | DUAL |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | NP | COMMON |
| 7 | +Vout | +Vout |

All dimensions are in mm[inches]

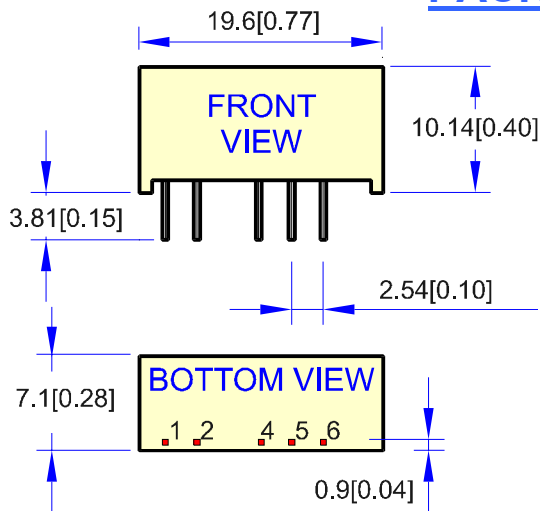


DC-DC Converter UNIT

PU Series (1W UNREGULATED DC-DC CONVERTER)

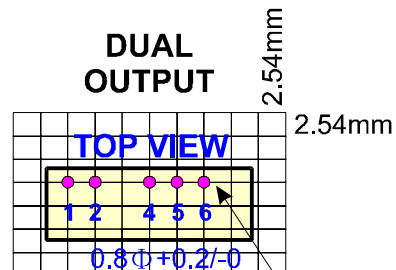
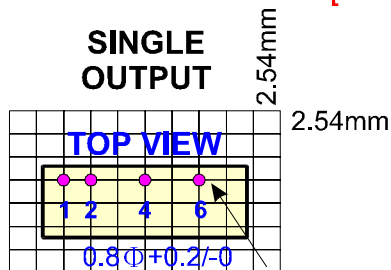


PACKAGE "C"



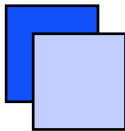
| PIN | SINGLE | DUAL |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 4 | -Vout | -Vout |
| 5 | NP | COMMON |
| 6 | +Vout | +Vout |

All dimensions are in mm[inches]



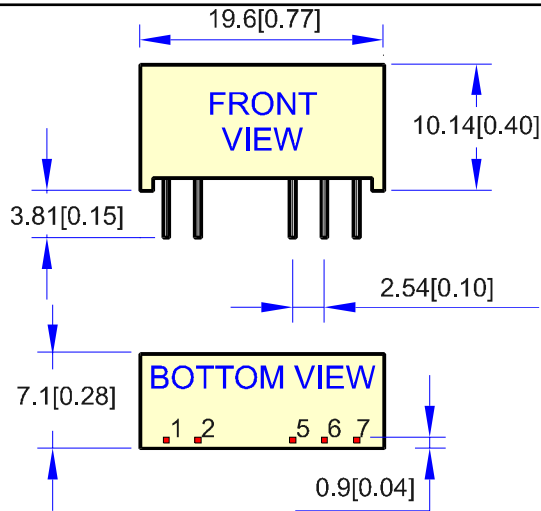
PACKAGE "D"

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



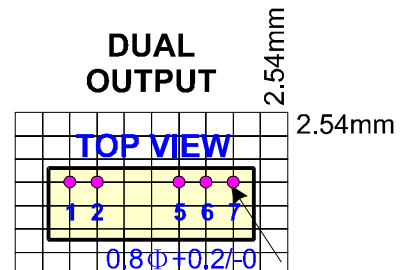
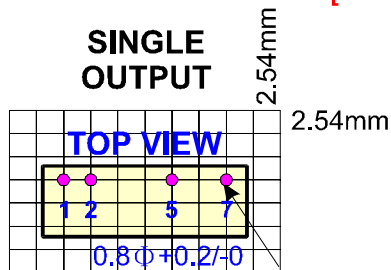
DC-DC Converter UNIT

PU Series (1W UNREGULATED DC-DC CONVERTER)

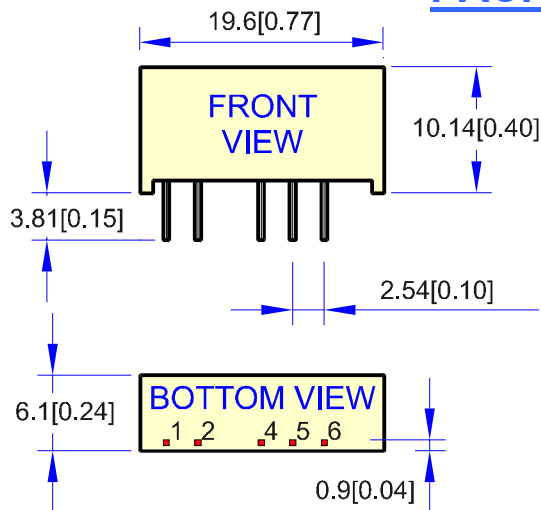


| PIN | SINGLE | DUAL |
|-----|--------|--------|
| 1 | +Vin | +Vin |
| 2 | -Vin | -Vin |
| 5 | -Vout | -Vout |
| 6 | NP | COMMON |
| 7 | +Vout | +Vout |

All dimensions are in mm[inches]

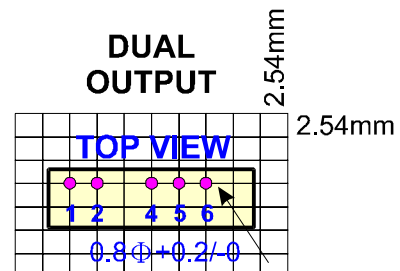
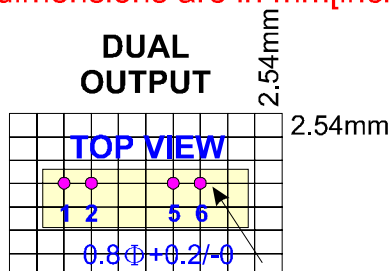


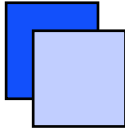
PACKAGE "E"



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

All dimensions are in mm[inches]

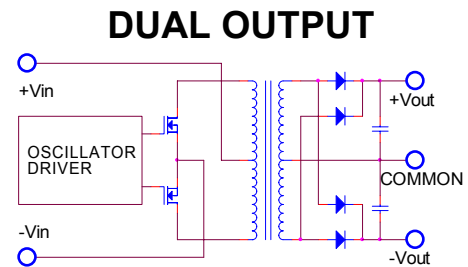
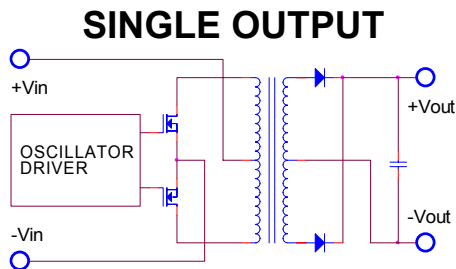




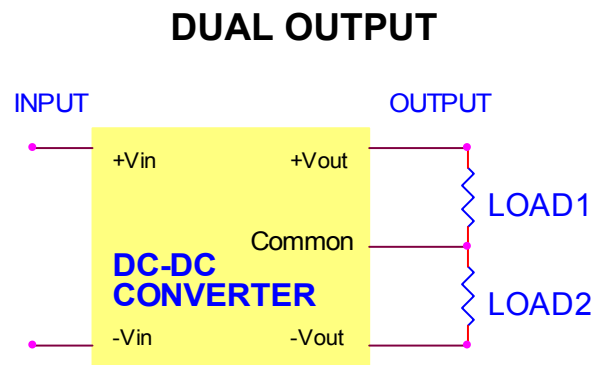
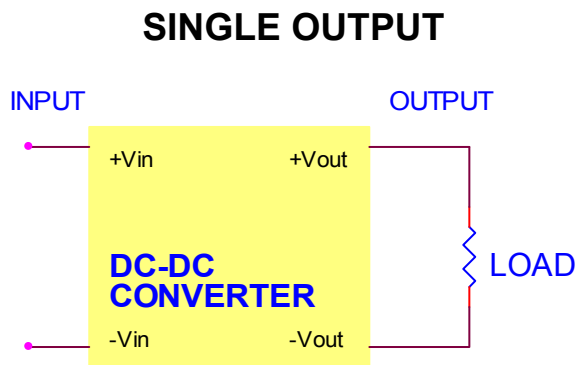
DC-DC Converter UNIT

PU Series (1W UNREGULATED DC-DC CONVERTER)

● SIMPLIFIED SCHEMATIC



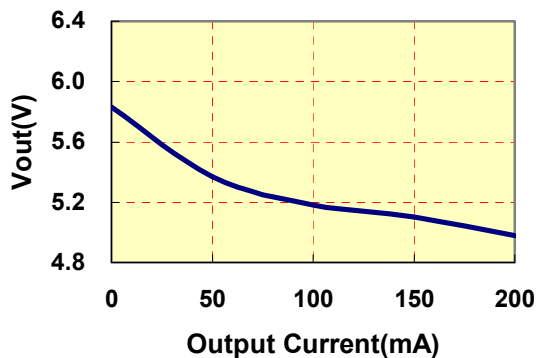
● TYPICAL APPLICATIONS



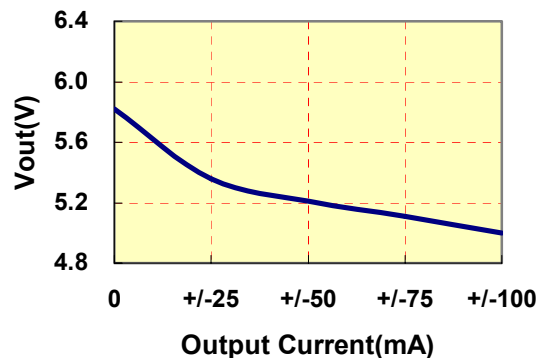
● TYPICAL PERFORMANCE CURVES

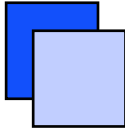
Specifications typical at $T_A=25^{\circ}\text{C}$, nominal input voltage, rated output current unless otherwise specified.

VOU_T VS LOAD(5V_{out} Models)



VOU_T VS LOAD(+/- 5V_{out} Models)

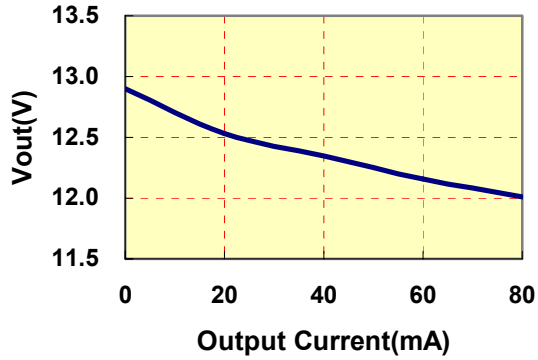




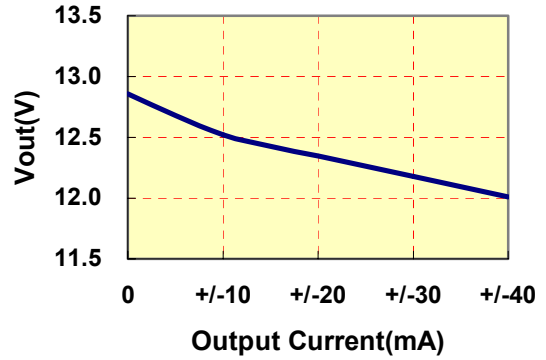
DC-DC Converter UNIT

PU Series (1W UNREGULATED DC-DC CONVERTER)

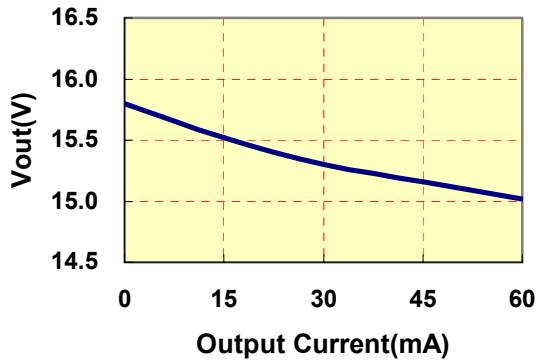
VOUT VS LOAD(12Vout Models)



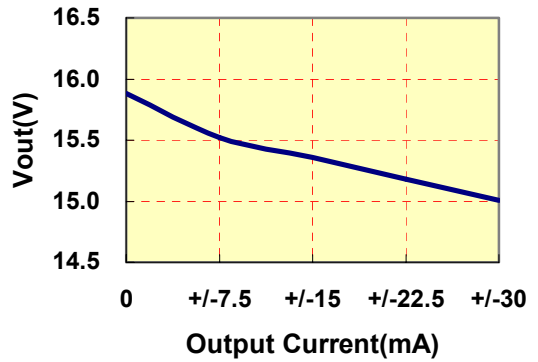
VOUT VS LOAD(+/- 12Vout Models)



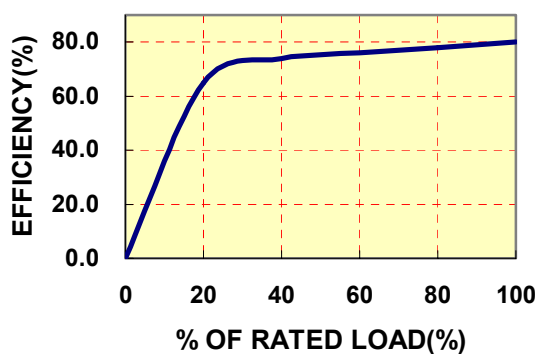
VOUT VS LOAD(15Vout Models)



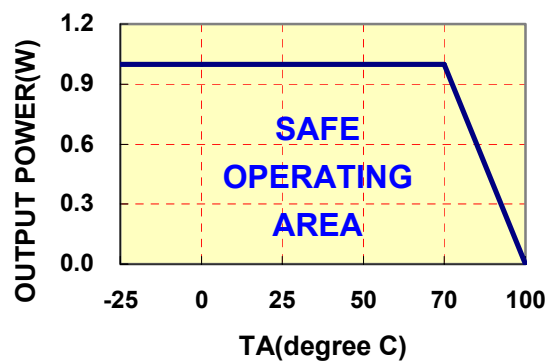
VOUT VS LOAD(+/- 15Vout Models)

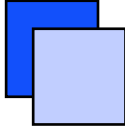


EFFICIENCY VS LOAD



DERATING CURVE





DC-DC Converter UNIT

PU Series (1W UNREGULATED DC-DC CONVERTER)

PU 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 0.5ohm from DC to 250KHz is required.

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:

Power Systems – The Power Solution

74360 Ilsfeld-Auenstein (Germany) Dörnet 8

Tel: + 49 / 70 62 / 67 59 – 6

Fax: + 49 / 70 62 / 67 59 -80

E-mail: Info@Power-Systems.de

Home Page: www.Power-Systems.de
