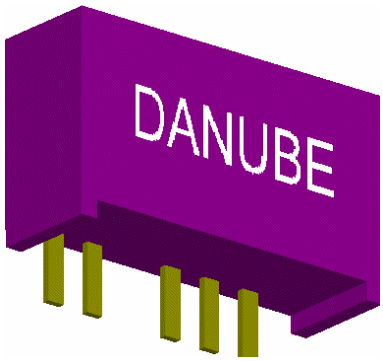
DC-DC Converter UNIT

PR Series (1 W REGULATED DC-DC CONVERTER)

FEATURES

- 1000VDC ISOLATION
- EFFICIENCY UP TO 63%
- INTERNAL SMD TECHNOLOGY
- LOW COST
- NO EXTERNAL COMPONENTS REQUIRED
- UP TO 1W REGULATED OUTPUT POWER
- SINGLE IN LINE PACKAGE
- 100% BURNED IN
- MTBF > 1,800,000 HOURS



OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/- 2% max
Temperature Coefficient	+/- 0.03%/ °C
Ripple & Noise (20MHz BW)	100mVp-p max
Line Regulation[1]	+/- 0.5% max
Load Regulation[2]	+/- 0.5% max
Short Circuit Protection	Current Limit Protection
Short Circuit Restart	Automatic

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	50% min
Isolation Voltage[3]	1000 VDC min
Isolation Resistance	10^9 ohms min
Switching Frequency	100 KHz min
Isolation Capacitance	80pF max
MTBF	1,800,000 Hours
Weight	2.3g Typ
Case Material	Non-Conductive Plastic
Case Size	19.6mm*7.1mm*10.2mm

[1] *Line Regulation is for High Line to Low Line.*

[2] *Load Regulation is for output load current change from 10% to 100%.*

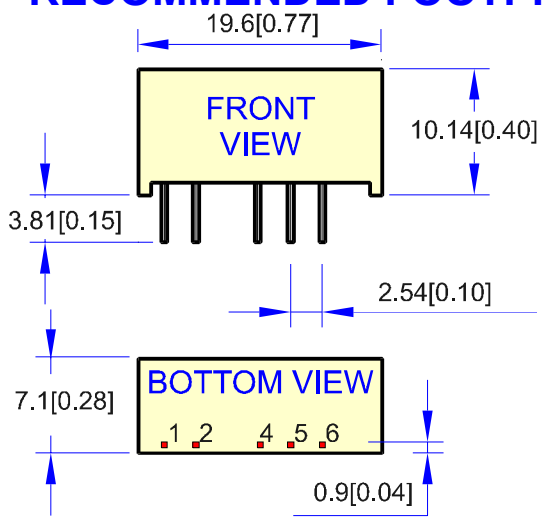
[3] *For 60 seconds*

SELECTION GUIDE
1W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)	OUTPUT POWER (Watt)
				FULL LOAD	NO LOAD			
PRS-0505C	4.5-5.5	5	200	350	20	57	1000	1
PRS-0512C	4.5-5.5	12	84	330	32	61	1000	1
PRS-0515C	4.5-5.5	15	67	322	32	62	1000	1
PRS-1205C	10.8-13.2	5	200	141	10	59	1000	1
PRS-1212C	10.8-13.2	12	84	158	38	53	1000	1
PRS-1215C	10.8-13.2	15	67	132	15	63	1000	1
PRS-2405C	21.6-26.4	5	200	67	6	62	1000	1
PRS-2412C	21.6-26.4	12	84	66	6	63	1000	1
PRS-2415C	21.6-26.4	15	67	68	10	61	1000	1

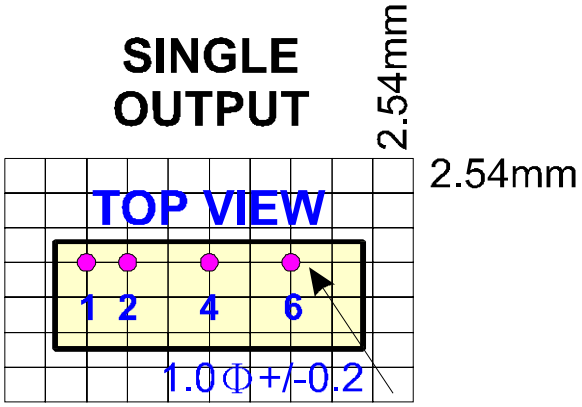
Note: Other input to output voltages may be available. Please contact factory.

MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

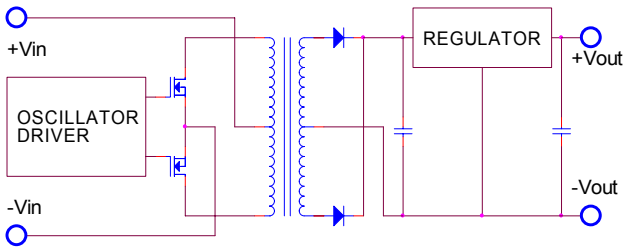


All dimensions are in mm[inches]

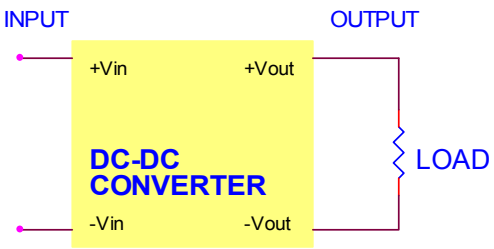
PIN	SINGLE
1	+Vin
2	-Vin
4	-Vout
5	NP
6	+Vout



SIMPLIFIED SCHEMATIC

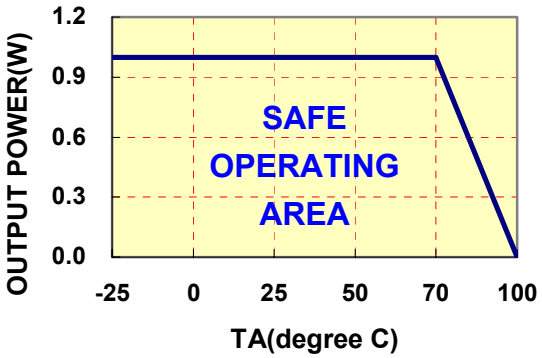


TYPICAL APPLICATIONS

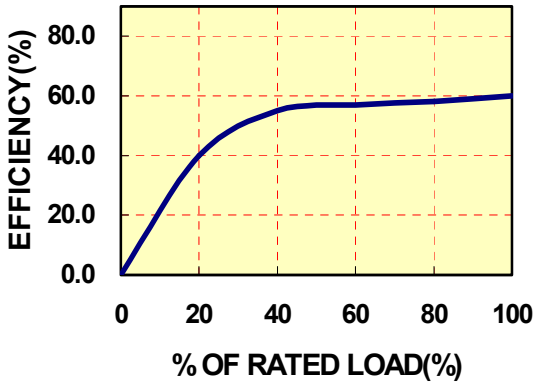


TYPICAL PERFORMANCE CUREVES

DERATING CURVE



EFFICIENCY VS LOAD



PR SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the PR series.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 250KHz 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 100uF.

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