

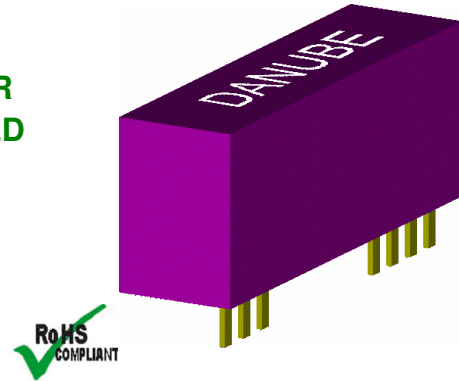
PAW SERIES

2W WIDE INPUT RANGE

DANUBE

FEATURES

- LEAD FREE
- 1000VDC ISOLATION
- SINGLE IN LINE PACKAGE
- UP TO 2W REGULATED OUTPUT POWER
- NO EXTERNAL COMPONENTS REQUIRED
- INTERNAL FILTERING
- 100% BURNED IN
- HIGH EFFICIENCY
- 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) ¹	100mVp-p max
Line Regulation ²	+/-0.5% max
Load Regulation ³	+/-0.5% max
Minimum Load	10% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Over Load Protection	150% Typ

INPUT SPECIFICATIONS

Input Voltage Range	2:1 Input Range
Input Filter	Pi Network
Protection	Fuse Recommended

GENERAL SPECIFICATIONS

Efficiency	60% min
Isolation Voltage ⁴	1000VDC 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*11.10mm*9.20mm
Potting Material	Epoxy(UL94-V0)
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Storage Temperature	-55°C to +105°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 High Line to Low Line.

³ Load Regulation is for output load current change from 10% to 100%.

⁴ For 10 seconds.

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

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2006/11/01

● **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			
				PAWS-0503.3	4.5-9			
PAWS-0505	4.5-9	5	400	602	50	66	1000	H
PAWS-0509	4.5-9	9	200	500	50	72	1000	H
PAWS-0512	4.5-9	12	150	500	50	72	1000	H
PAWS-0515	4.5-9	15	120	500	50	72	1000	H
PAWS-1203.3	9-18	3.3	500	205	30	67	1000	H
PAWS-1205	9-18	5	400	222	20	75	1000	H
PAWS-1209	9-18	9	222	225	20	74	1000	H
PAWS-1212	9-18	12	168	213	20	78	1000	H
PAWS-1215	9-18	15	133	213	20	78	1000	H
PAWS-2405	18-36	5	400	112	12	74	1000	H
PAWS-2409	18-36	9	222	111	13	75	1000	H
PAWS-2412	18-36	12	168	107	11	78	1000	H
PAWS-2415	18-36	15	133	107	11	78	1000	H
PAWS-4803.3	36-75	3.3	500	52	8	67	1000	H
PAWS-4805	36-75	5	400	56	8	74	1000	H
PAWS-4809	36-75	9	222	55	8	75	1000	H
PAWS-4812	36-75	12	168	54	8	78	1000	H
PAWS-4815	36-75	15	133	54	8	78	1000	H

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

⁶ NOMINAL INPUT VOLTAGE.

⁷ NOMINAL INPUT VOLTAGE, FULL LOAD.

● **SELECTION GUIDE(2)**
2W OUTPUT

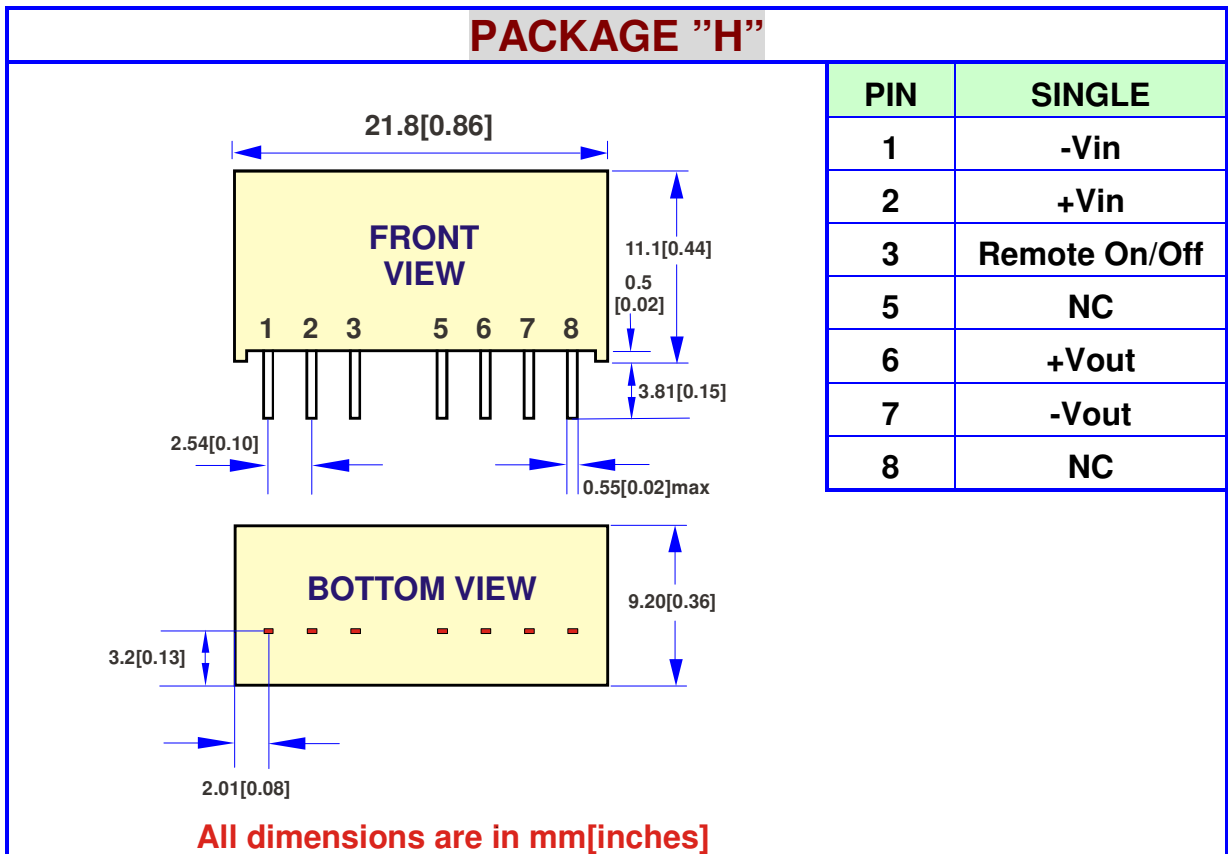
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁸		EFF (%) ⁹	ISOLATION (VDC)	PACKAGE
				CURRENT(mA)				
				FULL LOAD	NO LOAD			
PAWS-0503.3J	4.5-9	3.3	500	516	50	64	1000	J
PAWS-0505J	4.5-9	5	400	602	50	66	1000	J
PAWS-0509J	4.5-9	9	200	500	50	72	1000	J
PAWS-0512J	4.5-9	12	150	500	50	72	1000	J
PAWS-0515J	4.5-9	15	120	500	50	72	1000	J
PAWS-1203.3J	9-18	3.3	500	205	30	67	1000	J
PAWS-1205J	9-18	5	400	222	20	75	1000	J
PAWS-1209J	9-18	9	222	225	20	74	1000	J
PAWS-1212J	9-18	12	168	213	20	78	1000	J
PAWS-1215J	9-18	15	133	213	20	78	1000	J
PAWS-2403.3J	18-36	3.3	500	98	12	71	1000	J
PAWS-2405J	18-36	5	400	112	12	74	1000	J
PAWS-2409J	18-36	9	222	111	13	75	1000	J
PAWS-2412J	18-36	12	168	107	11	78	1000	J
PAWS-2415J	18-36	15	133	107	11	78	1000	J
PAWS-4803.3J	36-75	3.3	500	52	8	67	1000	J
PAWS-4805J	36-75	5	400	56	8	74	1000	J
PAWS-4809J	36-75	9	222	55	8	75	1000	J
PAWS-4812J	36-75	12	168	54	8	78	1000	J
PAWS-4815J	36-75	15	133	54	8	78	1000	J

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

⁸ NOMINAL INPUT VOLTAGE.

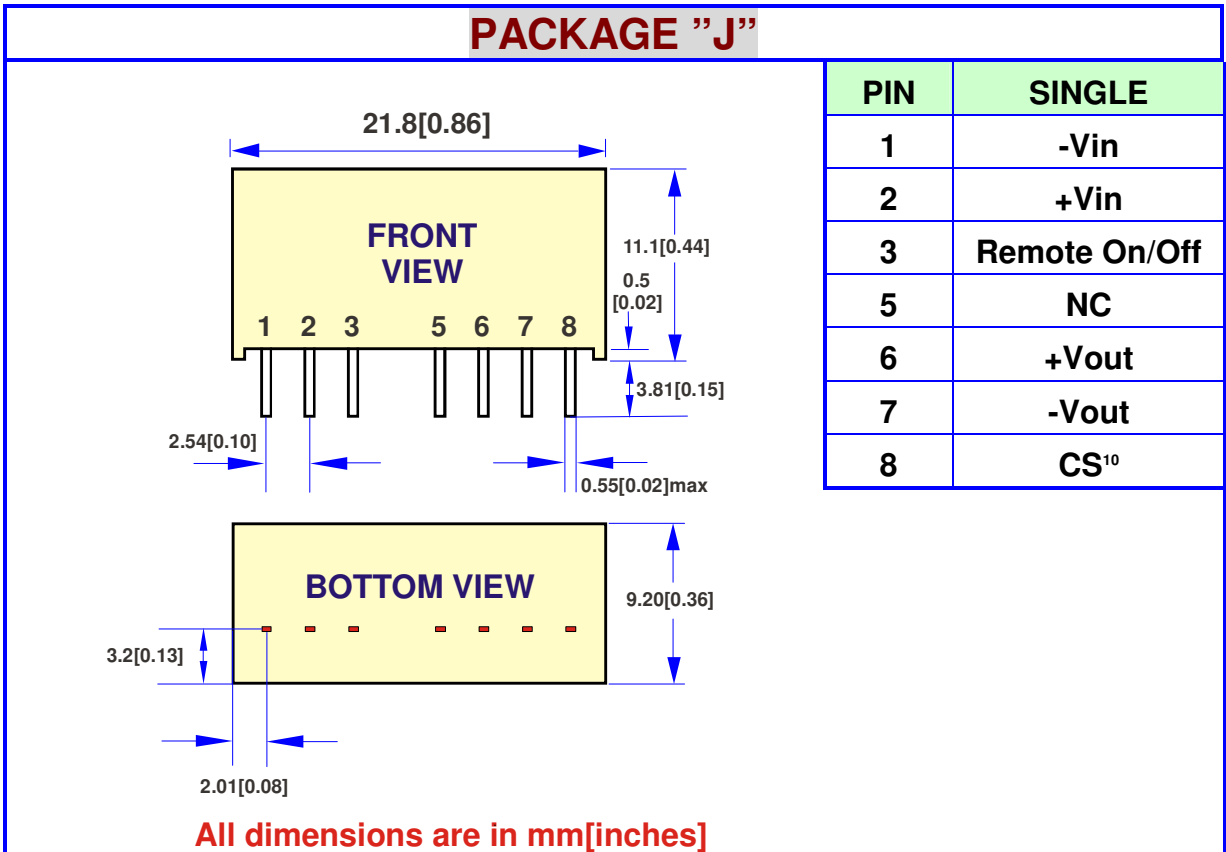
⁹ NOMINAL INPUT VOLTAGE, FULL LOAD.

● **MECHANICAL DIMENSIONS(1) & RECOMMENDED FOOTPRINT DETAILS**



Remote On/Off Control		
Parameter	Min	Max
Supply On	Under 1 VDC or Open Circuit	
Supply Off	4VDC	
Standby Input Current		0.2mA
Control Input Current(On)		-0.4mA
Control Input Current(Off)		1mA
Control Common	Referred to -Vin (pin 1)	

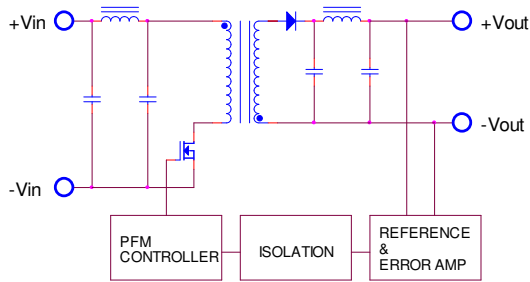
● **MECHANICAL DIMENSIONS(2) & RECOMMENDED FOOTPRINT DETAILS**



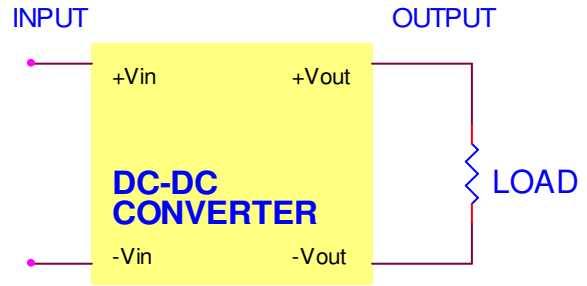
Remote On/Off Control		
Parameter	Min	Max
Supply On	Under 1 VDC or Open Circuit	
Supply Off	4VDC	
Standby Input Current		0.2mA
Control Input Current(On)		-0.4mA
Control Input Current(Off)		1mA
Control Common	Referred to -Vin (pin 1)	

¹⁰ Additional capacitance can be added from this pin to pin7. Any lower ESR capacitor will remove ripple and noise to some degree. The desired ripple figure. Values can be up to 100µF.

● SIMPLIFIED SCHEMATIC



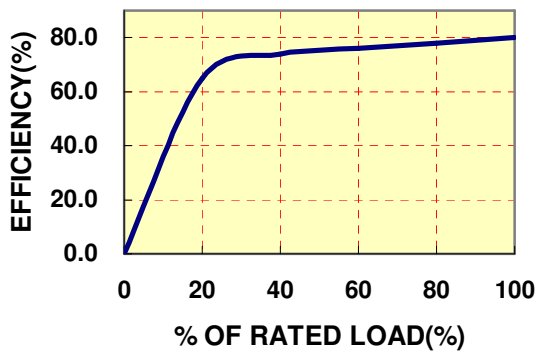
● TYPICAL APPLICATIONS



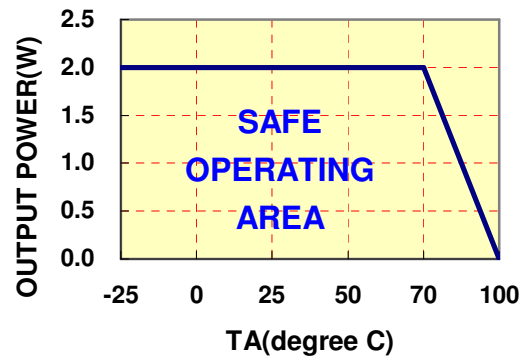
● TYPICAL PERFORMANCE CURVES

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

OUTPUT LOAD VS EFFICIENCY



TEMPERATURE DERATING



● INPUT FUSE SELECTION GUIDE

4.5-9V INPUT VOLTAGE(VDC)	9-18V INPUT VOLTAGE(VDC)	18-36V INPUT VOLTAGE(VDC)	36-75V INPUT VOLTAGE(VDC)
1500mA Slow-Blow Type	700mA Slow-Blow Type	350mA Slow-Blow Type	135mA Slow-Blow Type

The diagram shows a yellow block labeled 'DC-DC CONVERTER'. The input terminals are labeled '+Vin' and '-Vin'. A fuse is connected in series with the +Vin input line. The output terminals are labeled '+Vout' and '-Vout'.

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

PAW SERIES APPLICATION NOTES:
EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the PAW 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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