



BW Series of 2.5 to 3.0 Watt DC/DC Converters

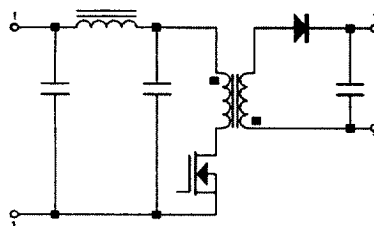


HIGH-DENSITY DC/DC CONVERTERS WITH SINGLE OR DUAL REGULATED OUTPUTS AND WIDE INPUT RANGE. ALL MODELS FEATURE 24-PIN DIP COMPATIBLE CONFIGURATION. AN INTERNAL INPUT Π (Pi) FILTER IS STANDARD AND IS USED TO REDUCE REFLECTED RIPPLE CURRENT. ALL MODELS HAVE A PHENOLIC UL94V0-RATED CASE.



DIMENSIONS:
1.25" x 0.80" x 0.52"
(31.75) x (20.32) x (13.21)mm

BLOCK DIAGRAM



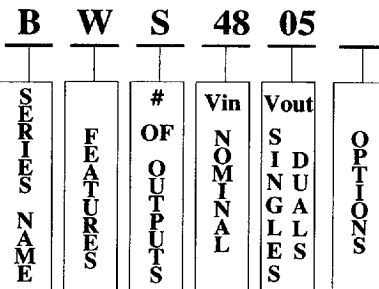
FEATURES

- Industry Standard Pin Out
- 500 VDC I/O Isolation
- Continuous Short Circuit Protection
- Input Π (Pi) Filter

APPLICATIONS

- A/D-D/A Converters
- RS-232 Drivers
- Industrial Control Circuit
- Operational Amplifiers
- Bias Power For RAMs, ROMs, PROMs

PART NUMBER SELECTION GUIDE



Features
• Series Pass Transistor
• Regulated

of Outputs
S = SINGLE
D = DUAL

Input Voltage Range (VDC)
5 = 4.5 to 9.0
12 = 9.0 to 18.0
24 = 18.0 to 36.0
48 = 36.0 to 72.0

Output Voltage (VDC)

Single Output:
05 = 5V @ 500mA
12 = 12V @ 250mA
15 = 15V @ 200mA

Dual Output:
05 = $\pm 0.5V$ @ $\pm 250mA$
12 = $\pm 12V$ @ $\pm 125mA$
15 = $\pm 15V$ @ $\pm 100mA$

For Other Output Voltages Please Consult Factory

Options

S (#) = Modification Number
I = Industrial Temperature Range (-40°C to +85°C)

24

INTERNATIONAL POWER DEVICES, INC.

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PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS	NOTES:
GENERAL:						
Switching Frequency	180	200	220	KHz		1. Noderating required up to a maximum case temperature of 85°C. Internal Power Dissipation = $P_{out} * (1 - \text{Eff}) / \text{Eff}$.
Isolation Voltage				VDC		
Input to Output	500			VDC		
Input to Case	500			VDC		
Output to Case	500			VDC		
Isolation Resistance				Ohms		Note 3
Input to Output	10 ⁹					
Isolation Capacitance				pF		
Input to Output	80					2. Provided for input fuse selection.
Short Circuit Protection						
ENVIRONMENTAL:						
Operating Temperature						Note 1 Ambient Non-Condensing Non-Condensing
Commercial Grade	-25		85	°C		
Storage Temperature	-40		125	°C		
Operating Humidity			95	%		
Storage Humidity			95	%		3. Continuous Short Circuit Protection is provided. For dual output units the short circuit current on each individual output is equivalent to the short circuit current for a single output unit.
INPUT:						
Input Voltage						
5 Vin	4.50	5.00	9.00	VDC		Note 2 Note 2 Note 2 Note 2
12 Vin	9.00	12.00	18.00	VDC		
24 Vin	18.00	24.00	36.00	VDC		
48 Vin	36.00	48.00	72.00	VDC		
Input Current						
5 Vin			0.76	Amps		Note 2 Note 2 Note 2 Note 2
12 Vin			0.42	Amps		
24 Vin			0.21	Amps		
48 Vin			0.11	Amps		
Input Ripple Current			20%	Iin max		4. Long term continuous operation in this mode is not recommended. Converter will auto-restart once short has been removed.
Reverse Input Current			100%	Iin max		
No Load Input Power			0.70	W		
OUTPUT:						
Singles:						
Voltage Accuracy			±1.00%	Vout	Full Load	10% to 100% LL to HL Note 3
Load Regulation			±1.00%	Vout		
Line Regulation			±1.00%	Vout		
Current Limit			180%	Iout		
Duals:						
Voltage Accuracy					Full Load	Full Load
+Vout			±1.00%	Vout		
-Vout			±1.00%	Vout		10% to 100% 10% to 100% LL to HL
Load Regulation						
+Vout			±1.00%	Vout		
-Vout			±1.00%	Vout		
Line Regulation			±1.00%	Vout		p-p, 20 MHz BW 1% Error Band
Temp. Coefficient			0.02%	/°C		
Voltage Stability			0.05%	Vout		
Ripple and Noise			1.00%	Vout		
Transient Response						
1/4 to Full load			500	µS		

- All specifications typical at +25°C Nominal Line and Full Load unless otherwise noted.
- Specifications subject to change without notice.



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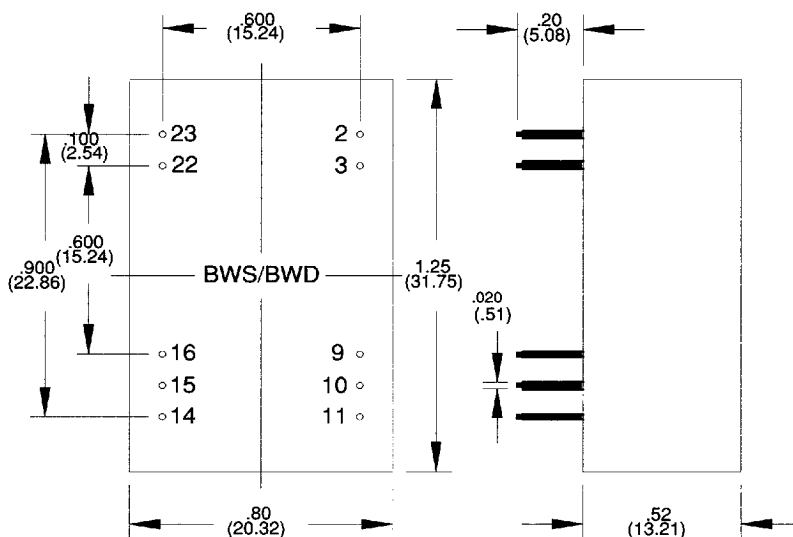
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PIN #	SINGLE	DUAL
1 & 24	No Pin	No Pin
2 & 23	-Vin / +Vin	-Vin / +Vin
3 & 22	-Vin / +Vin	-Vin / +Vin
4 & 21	No Pin	No Pin
5 & 20	No Pin	No Pin
6 & 19	No Pin	No Pin
7 & 18	No Pin	No Pin
8 & 17	No Pin	No Pin
9 & 16	No Connect	No Connect
10 & 15	NC / -Vout	Com / Com
11 & 14	NC / NC	NC / NC
12 & 13	NC / +Vout	-Vout / +Vout

BOTTOM VIEW

Mechanical tolerances are $\pm 0.04''$



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All dimensions are in inches (MM)



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