BW3 Series

2:1 Input Voltage Range
3W DIP24

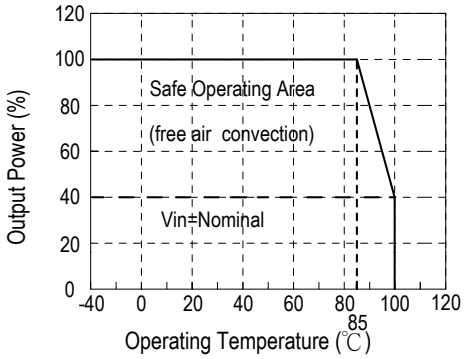
Features

- ●Wide 2:1 Input Voltage Range
- ●Very Low Stand-by (no-load) Power Consumption 50mW typ. and 150mW max.
- ●Very High Efficiency up to 86%
- ●3W Single and Dual outputs
- ● I/O Isolation 2KVDC,4KVDC and 6KVDC Option
- ●Operating Temperature Range -40℃ to +85℃
- ●Continuous Short Circuit Protection
- ●Remote ON/OFF Control add Suffix "/CTRL" Option
- ●A&C Pinning Option

DIP24, Single & Dual Outputs

RoHS

Derating Graph



Description

The BW3 series is an excellent performance and,
Wide 2:1 input voltage ranges: 4.5V-9V,9V-18V,18V-36V and 36V-75V
The highest efficiency allows -40℃ to +85℃ operating temperatures.
The very low stand-by (no-load)input power consumption 50mW typ,makes them an ideal solution for application in battery-powered equipment and instrumentation.

Selection Guide

Part Number	Input Voltage Range VDC	Output Voltage VDC	Output Current max. mA	Efficiency Typ. %	Max. Capacitive Load
BW3-xx03SXY	4.5-9,9-18,18-36,36-75	3.3 VDC	600 mA	77,78,79,80	1000uF
BW3-xx05SXY	4.5-9,9-18,18-36,36-75	5 VDC	600 mA	80,82,83,83	1000uF
BW3-xx09SXY	4.5-9,9-18,18-36,36-75	9 VDC	333 mA	80,84,84,84	680uF
BW3-xx12SXY	4.5-9,9-18,18-36,36-75	12 VDC	250 mA	83,85,85,85	470uF
BW3-xx15SXY	4.5-9,9-18,18-36,36-75	15 VDC	200 mA	83,85,85,85	330uF
BW3-xx05DXY	4.5-9,9-18,18-36,36-75	±5 VDC	±300 mA	80,82,83,83	±470uF
BW3-xx12DXY	4.5-9,9-18,18-36,36-75	±12 VDC	±125 mA	82,84,86,85	±100uF
BW3-xx15DXY	4.5-9,9-18,18-36,36-75	±15 VDC	±100 mA	82,84,86,85	±47uF

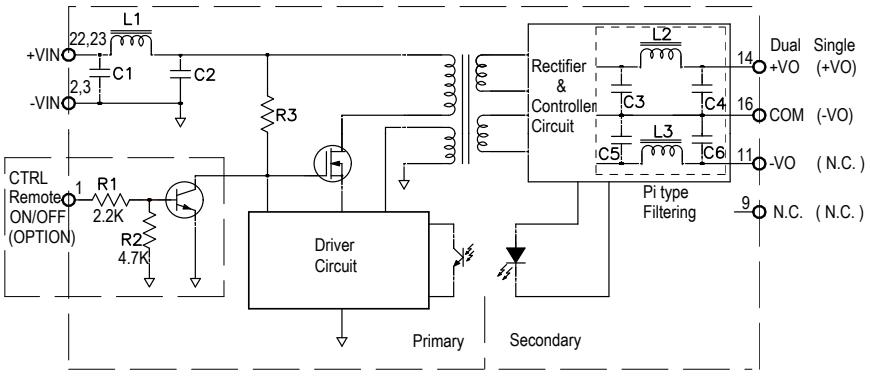
X=Isolation(KVDC),X=2=2KVDC,X=4=4KVDC,X=6=6KVDC
Y=Pinning ; Y=A=A Pinning,Y=C=C Pinning
xx=Vin(Nominal), xx=05=5VDC(4.5~9VDC)
xx=12=12VDC(9~18VDC)
xx=24=24VDC(18~36VDC)
xx=48=48VDC(36~75VDC)

Specifications

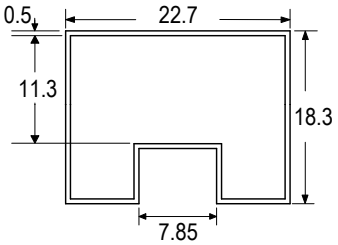
(measured at T_A=25℃ ,nominal input voltage, full load and after warm-up)

Input Voltage Range	4.5-9V,9-18V,18-36V,36-75V	2:1
Input Filter		Pi type
Output Voltage Accuracy	Nominal Vin and full load	±2%
Line Voltage Regulation	Vin=min to max,full load	±0.5% typ.
Load Voltage Regulation	20% to 100% of full load	±0.5% typ.
Output Ripple and Noise	20MHz BW	60mVp-p max.
Operating Frequency		100kHz min.
No Load Power Cosumption		50mW typ. / 150mW max.
Isolation Voltage	1 second	2K,4K & 6K VDC
Isolation Capacitance	100KHz tested	30PF max.
Isolation Resistance	500VDC, input to output	15GΩ min.
Short Circuit Protection		Continuous
Temperature Coefficient	- 40℃ to +85℃ ambient	0.015%/℃ typ.
Temperature Rise at Full Load		15℃ typ.
Operating Temperature Range	see Graph	-40℃ to +100℃
Operating Case Temperature		+110℃ max.
Storage Temperature Range		-55℃ to +125℃
Relative Humidity		95% RH
Case Material	UL94-V0	Non-conductive black plastic
Potting Material	UL94-V0	Epoxy
Package Weight		13g
Packing Quantity		15 pcs per Tube
Lead Temperature		300℃ max. 1.5mm from case for 10 sec
Remote Power OFF (leave open if not used)	Device ON	open or <0.8VDC
(15VDC max.)	Device OFF	CTRL>1.5VDC
	Device OFF Stand by input current	0.5mA max.
MTBF(+25℃)	using MIL-HDBK 217F	3192x10^3 hours
(+85℃)	using MIL-HDBK 217F	265x10^3 hours

Functional Block Diagram (A Pinning)



Tube Outline Dimensions (mm)



Tolerance:

XX.X ± 0.5 mm

Note:

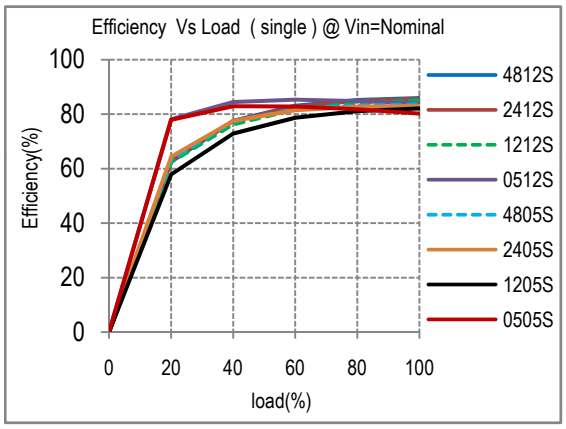
L=530 ± 2 mm

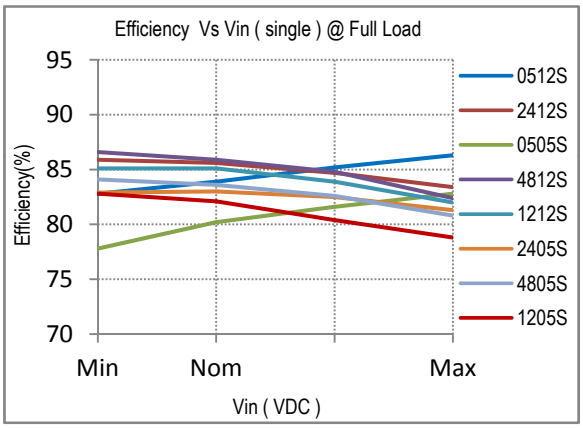
Devices per tube

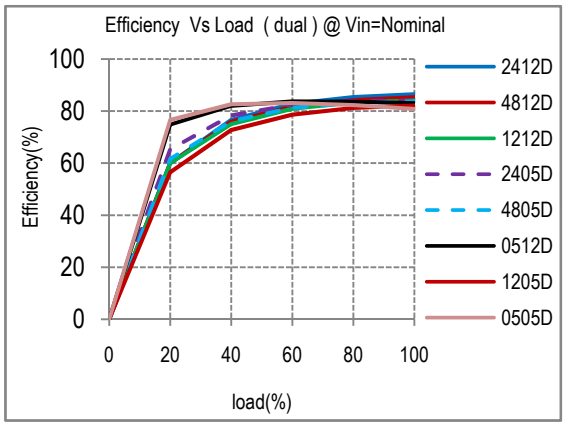
Quanttity: 15PCS

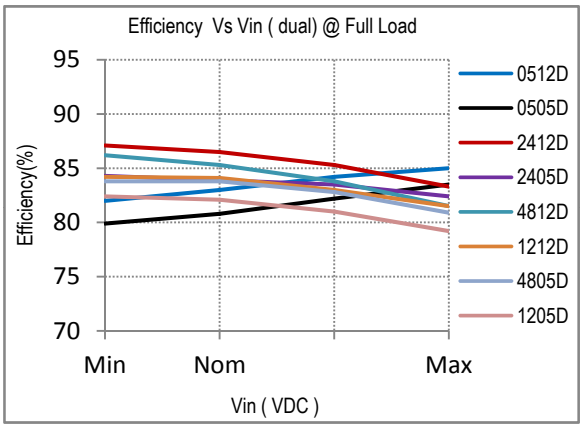
The Values of Input π type Filtering

Input Voltage	C1	C2	L1
4.5~9, 9~18VDC	1uF~10uF	10uF/25V	0.47uH~4.7uH
18~36VDC	0.1uF~1uF	4.7uF/50V	1uH~10uH
36~75VDC	0.1uF~1uF	1uF/100V	2.2uH~22uH





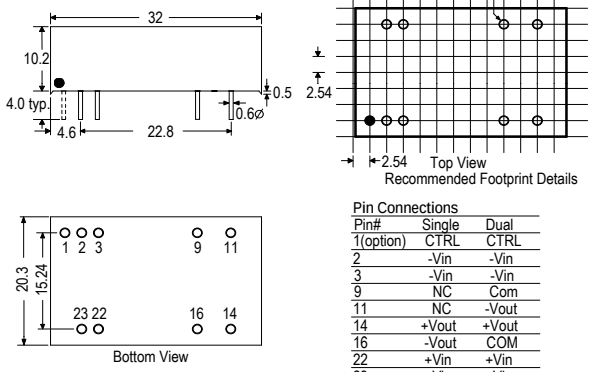




Package Style and Pinning (mm)

DIP24 Package

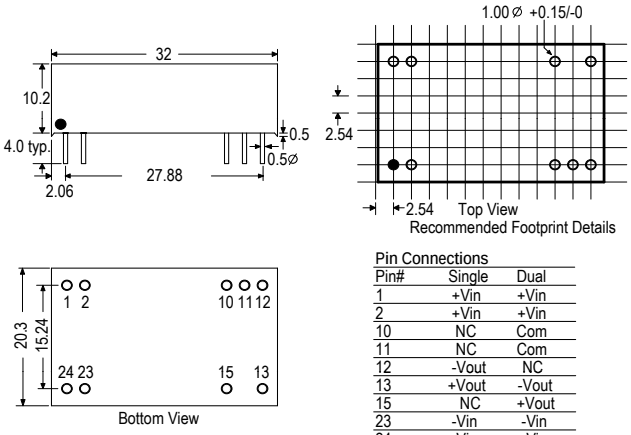
"A" PINNING



Pin Connections		
Pin#	Single	Dual
1(option)	CTRL	CTRL
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	COM
22	+Vin	+Vin
23	+Vin	+Vin

NC=No Connection
CTRL=Remote ON/OFF Control
e.g. BW3-1205S4A/CTRL

"C" PINNING



Pin Connections		
Pin#	Single	Dual
1	+Vin	+Vin
2	+Vin	+Vin
10	NC	Com
11	NC	Com
12	-Vout	NC
13	+Vout	-Vout
15	NC	+Vout
23	-Vin	-Vin
24	-Vin	-Vin

NC=No Connection

XX.X ± 0.25 mm

XX.XX ± 0.15 mm