



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



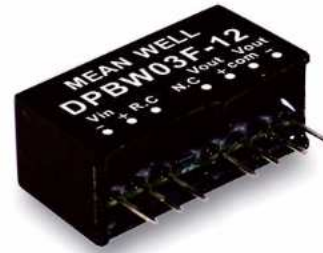
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■ Features

- SIP8 package with industry standard pinout
- 4:1 ultrawide input range
- Operating temperature range -40 ~ +85°C
- No minimum load required
- Comply to EN55032 radiated Class A without additional components
- High efficiency up to 85%
- Protections: Short circuit (Continuous) / Overload / Input under voltage
- 1.5KVDC I/O isolation
- Remote ON/OFF control
- 3 years warranty

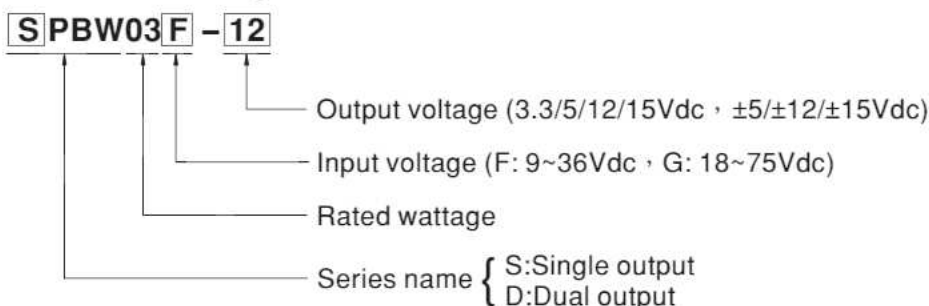
■ Applications

- Telecom/datacom system
- Wireless network
- Industrial control facility
- Instrument
- Analyzer
- Detector
- Data switch

■ Description

SPBW03 and DPBW03 series are 3W isolated and regulated module type DC-DC converter with SIP8 package. It features international standard pins, a high efficiency up to 85%, wide working temperature range -40~+85°C, 1.5KVDC I/P-O/P isolation voltage, compliance to EN55032 radiated Class A without additional components, continuous-mode short circuit protection, etc. The models account for different input voltage 9~36V and 18~75V 4:1 wide input range, and various output voltage, 3.3V/5V/12V/15V for single output and ±5V/±12V/±15V for dual outputs, which are suitable for all kinds of systems, such as industrial control, telecommunication field, distributed power architecture, and so on.

■ Model Encoding





3W SIP Package DC-DC Regulated Converter **SPBW03 & DPBW03** series

MODEL SELECTION TABLE							
ORDER NO.	INPUT			OUTPUT		EFFICIENCY (TYP.)	CAPACITOR LOAD (MAX.)
	INPUT VOLTAGE (RANGE)	INPUT CURRENT		OUTPUT VOLTAGE	OUTPUT CURRENT		
		NO LOAD	FULL LOAD				
SPBW03F-03	24V (9 ~ 36V)	5mA	122mA	3.3V	0 ~ 700mA	79%	180μF
SPBW03F-05		4mA	154mA	5V	0 ~ 600mA	81%	1000μF
SPBW03F-12		11mA	150mA	12V	0 ~ 250mA	84%	220μF
SPBW03F-15		12mA	150mA	15V	0 ~ 200mA	84%	120μF
DPBW03F-05		8mA	154mA	±5V	±0 ~ 300mA	81%	*100μF
DPBW03F-12		27mA	150mA	±12V	±0 ~ 125mA	83%	*470μF
DPBW03F-15		16mA	152mA	±15V	±0 ~ 100mA	81%	*100μF
SPBW03G-03	48V (18 ~ 75V)	3mA	61mA	3.3V	0 ~ 700mA	79%	180μF
SPBW03G-05		3mA	77mA	5V	0 ~ 600mA	82%	1000μF
SPBW03G-12		6mA	74mA	12V	0 ~ 250mA	85%	220μF
SPBW03G-15		7mA	75mA	15V	0 ~ 200mA	84%	120μF
DPBW03G-05		5mA	76mA	±5V	±0 ~ 300mA	82%	*100μF
DPBW03G-12		13mA	75mA	±12V	±0 ~ 125mA	83%	*470μF
DPBW03G-15		13mA	75mA	±15V	±0 ~ 100mA	83%	*100μF

* For each output

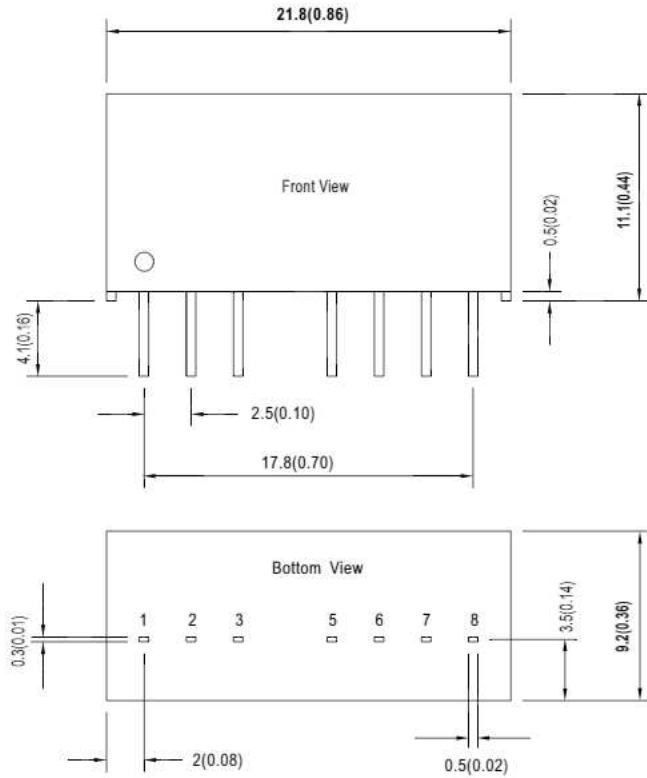


3W SIP Package DC-DC Regulated Converter **SPBW03 & DPBW03** series

SPECIFICATION				
INPUT	VOLTAGE RANGE	F: 9~36Vdc , G: 18~75Vdc		
	SURGE VOLTAGE (100ms max.)	24Vin models : 50Vdc, 48Vin models : 100Vdc		
	FILTER	Internal capacitor		
	PROTECTION	Fuse recommended. 24Vin models: 1A Slow-Blow, 48Vin models: 500mA Slow-Blow Type		
	INTERNAL POWER DISSIPATION	500mW		
OUTPUT	VOLTAGE ACCURACY	±1.5%		
	RATED POWER	3W		
	RIPPLE & NOISE <small>Note.2</small>	50mVp-p		
	LINE REGULATION <small>Note.3</small>	0.5%		
	LOAD REGULATION <small>Note.4</small>	Single output models: ±0.5%, Dual output models: ±1%		
	SWITCHING FREQUENCY (Min.)	100KHz		
PROTECTION	SHORT CIRCUIT	Protection type : Continuous, automatic recovery		
	OVERLOAD	Protection type : Recovers automatically after fault condition is removed		
	UNDER VOLTAGE LOCKOUT	Start-up voltage	24Vin : 7.5Vdc ; 48Vin : 15.5Vdc	
		Shutdown voltage	24Vin : 6Vdc ; 48Vin : 12Vdc	
FUNCTION	REMOTE CONTROL	Power ON: R.C. ~ -Vin open circuit ; Power OFF: R.C. ~ -Vin <1.2V or short		
ENVIRONMENT	COOLING	Free-air convection		
	WORKING TEMP.	-40 ~ +85°C (Refer to "Derating Curve")		
	CASE TEMPERATURE	+100°C max.		
	WORKING HUMIDITY	20% ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +125°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	0.03% / °C (0 ~ 85°C)		
	SOLDERING TEMPERATURE	1.5mm from case of 1 ~ 3sec./260°C max.		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
	SAFETY & EMC (Note.5)	WITHSTAND VOLTAGE	I/P-O/P:1.5KVDC	
ISOLATION RESISTANCE		I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH		
ISOLATION CAPACITANCE (Typ.)		500pF		
EMC EMISSION		Parameter	Standard	Test Level / Note
		Conducted	EN55032(CISPR32)	N/A
		Radiated	EN55032(CISPR32)	Class A
EMC IMMUNITY		Parameter	Standard	Test Level / Note
		ESD	EN61000-4-2	Level 2, ±8KV air, ±4KV contact
		Radiated Susceptibility	EN61000-4-3	Level 2, 3V/m
		EFT/Burest	EN61000-4-4	Level 1, 0.5KV
		Surge	EN61000-4-5	Level 1, 0.5KV Line-Line
		Conducted	EN61000-4-6	Level 2, 3V(e.m.f.)
		Magnetic Field	EN61000-4-8	Level 2, 3A/m
OTHERS	MTBF	Single output models: 2800Khrs ; Dual output models: 2100Khrs MIL-HDBK-217F(25°C)		
	DIMENSION (L*W*H)	21.8*9.2*11.1mm (0.86*0.36*0.44 inch)		
	CASE MATERIAL	Non-Conductive black plastic (UL 94V-0 rated)		
	PACKING	4.8g		
NOTE	<p>1.All parameters are specified at normal input(F:24Vdc, G:48Vdc), rated load, 25°C 70% RH ambient.</p> <p>2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf & 47µf capacitor.</p> <p>3.Line regulation is measured from low line to high line at rated load.</p> <p>4.Load regulation is measured from 10% to 100% rated load.</p> <p>5.The final equipment must be re-confirm that it still meet EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."(as available on http://www.meanwell.com)</p>			

■ Mechanical Specification

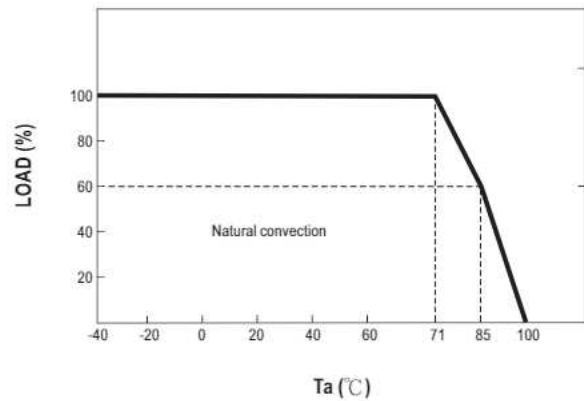
- All dimensions in mm(inch)
- Tolerance: $x.x \pm 0.5\text{mm}$ ($x.xx \pm 0.02''$)
- Pin pitch tolerance: $\pm 0.05\text{mm}$ ($\pm 0.002''$)



■ Plug Assignment

Pin No.	Pin-Out	
	SPBW03 (Single output)	DPBW03 (Dual output)
1	-Vin	-Vin
2	+Vin	+Vin
3	R.C.	R.C.
5	N.C.	N.C.
6	+Vout	+Vout
7	-Vout	Common
8	N.C.	-Vout

■ Derating Curve



■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>