

### ■ Features

- SIP8 package with industry standard pinout
- **8:1 (9~75Vdc)** ultra-wide input range
- Operating temperature range **-40 ~ +90°C**
- No minimum load required
- Comply to BS EN/EN55032 **radiated Class A without additional components**
- High efficiency up to 85%
- Protections: Short circuit (Continuous) / Overload / UVLO
- 3KVdc I/O isolation
- Remote ON/OFF control
- 3 years warranty

### ■ Applications

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

### ■ GTIN CODE

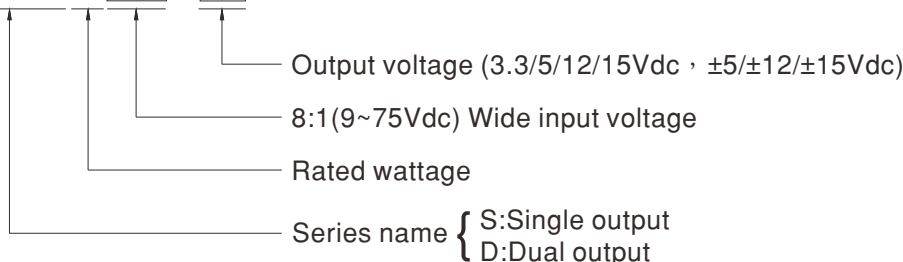
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

### ■ Description

SPBW03W8 and DPBW03W8 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~+90°C, 3KVdc I/P-O/P isolation voltage, Compliance to BS EN/EN55032 radiated Class A without additional components, continuous-mode short circuit protection, etc. SPBW03W8 and DPBW03W8 have an ultra-wide input range of 8:1(9~75Vdc), 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

**SPBW03W8-12**





3W SIP Package 8:1 Ultra-Wide Input DC-DC Regulated Converter **SPBW03W8 & DPBW03W8 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				
SPBW03W8-03	Nominal 12V, 24V, 36V, 48V, 72V (9 ~ 75V)	6mA	62mA	3.3V	0 ~ 700mA	78%	1800 $\mu$ F
SPBW03W8-05		4mA	77mA	5V	0 ~ 600mA	81%	1000 $\mu$ F
SPBW03W8-12		8mA	74mA	12V	0 ~ 250mA	85%	220 $\mu$ F
SPBW03W8-15		12mA	76mA	15V	0 ~ 200mA	83%	120 $\mu$ F
DPBW03W8-05		8mA	77mA	$\pm$ 5V	$\pm$ 0 ~ 300mA	81%	*470 $\mu$ F
DPBW03W8-12		12mA	76mA	$\pm$ 12V	$\pm$ 0 ~ 125mA	83%	*100 $\mu$ F
DPBW03W8-15		12mA	75mA	$\pm$ 15V	$\pm$ 0 ~ 100mA	84%	*47 $\mu$ F

\* For each output



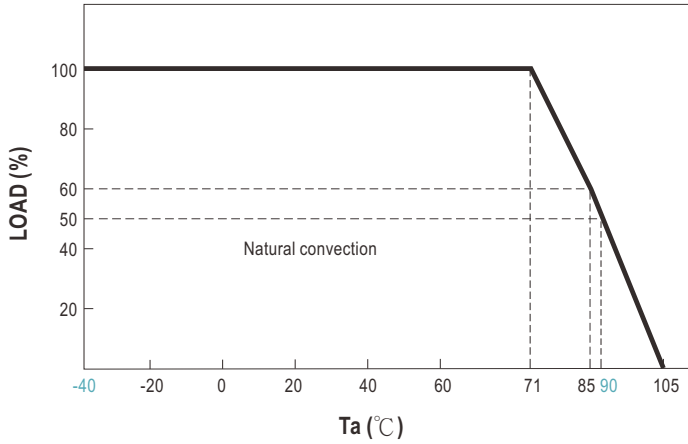
**SPECIFICATION**

<b>INPUT</b>			
VOLTAGE RANGE	9~75Vdc		
SURGE VOLTAGE (100ms max.)	100Vdc		
FILTER	Internal capacitor		
PROTECTION	Fuse recommended. 1A Slow-Blow.		
INTERNAL POWER DISSIPATION	500mW		
<b>OUTPUT</b>			
VOLTAGE ACCURACY	±1.5%		
RATED POWER	3W		
RIPPLE & NOISE Note.2	50mVp-p		
LINE REGULATION Note.3	±0.5%		
LOAD REGULATION Note.4	Single output models: ±0.5%, Dual output models: ±1%		
CROSS REGULATION	±5% @ 25%~100% Load only dual output		
SWITCHING FREQUENCY (Typ.)	450KHz		
<b>PROTECTION</b>			
SHORT CIRCUIT	Protection type : Continuous, automatic recovery		
OVERLOAD	110 ~ 230% rated output power		
	Protection type : Recovers automatically after fault condition is removed		
UNDER VOLTAGE LOCKOUT	Start-up voltage	8.8Vdc	
	Shutdown voltage	8Vdc (Typ.)	
<b>FUNCTION</b>			
REMOTE CONTROL	Power ON: R.C. ~ -Vin open circuit ; Power OFF: R.C. ~ -Vin <1.2Vdc or short		
<b>ENVIRONMENT</b>			
COOLING	Free-air convection		
WORKING TEMP.	-40 ~ +90°C (Refer to "Derating Curve")		
CASE TEMPERATURE	+110°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 ~ 90°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		
<b>SAFETY &amp; EMC (Note.5)</b>			
SAFETY STANDARDS	EAC TP TC 020/2011 approved		
WITHSTAND VOLTAGE	I/P-O/P:3KVdc		
ISOLATION RESISTANCE	I/P-O/P:1000M Ohms / 500Vdc / 25°C / 70% RH		
ISOLATION CAPACITANCE (Typ.)	1000pF		
EMC EMISSION	<b>Parameter</b>	<b>Standard</b>	<b>Test Level / Note</b>
	Conducted	BS EN/EN55032(CISPR32)	Class A/B with additional components
	Radiated	BS EN/EN55032(CISPR32)	Class A without additional components Class B with additional components
EMC IMMUNITY	<b>Parameter</b>	<b>Standard</b>	<b>Test Level / Note</b>
	ESD	BS EN/EN61000-4-2	Level 2, ±8KV air, ±4KV contact
	Radiated Susceptibility	BS EN/EN61000-4-3	Level 2, 3V/m
	EFT/Bursts	BS EN/EN61000-4-4	Level 1, 0.5KV
	Surge	BS EN/EN61000-4-5	Level 2, 0.5KV Line-Line
	Conducted	BS EN/EN61000-4-6	Level 2, 3V(e.m.f.)
	Magnetic Field	BS EN/EN61000-4-8	Level 2, 3A/m
<b>OTHERS</b>			
MTBF	1850Khrs 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 ; 14pcs/per tube, 2058pcs/147 tube/per carton		

**NOTE**

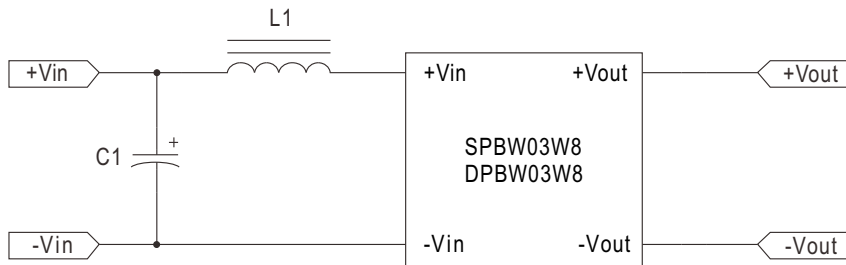
- All parameters are specified at normal input (48Vdc), rated load, 25°C 70% RH ambient.
  - Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf & 47µf capacitor.
  - Line regulation is measured from low line to high line at rated load.
  - Load regulation is measured from 0% to 100% rated load.
  - 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>)
- ※ Product Liability Disclaimer : For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

■ Derating Curve



■ EMC Suggestion Circuit

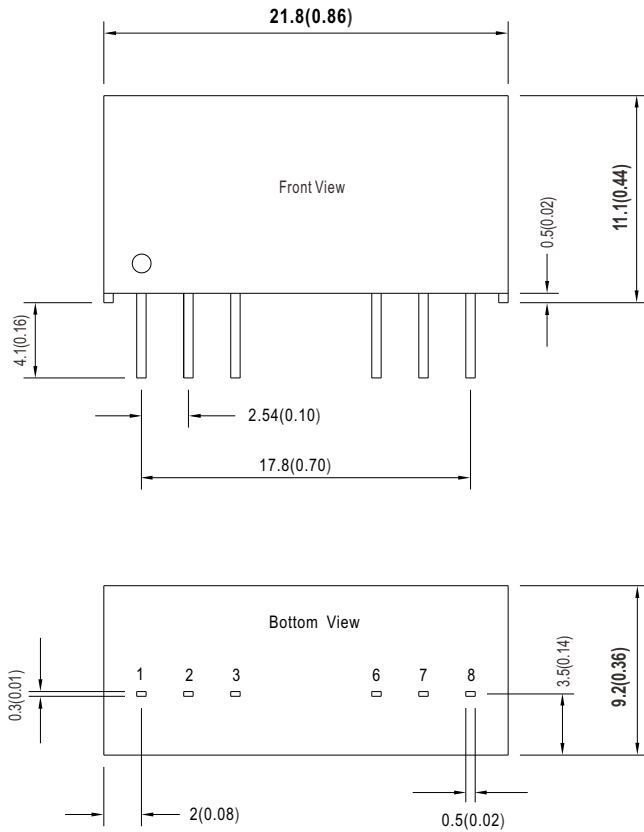
※ EMC Considerations EMI Test standard: BS EN/EN55032 Class A/B Conduct and BS EN/EN55032 Class B Radiation test conditions recommendations: Input Voltage: Nominal, Output Load: Full Load



Model No.	BS EN/EN55032 Class A(Conduction)		BS EN/EN55032 Class B(Conduction)	
	C1	L1	C1	L1
SPBW03W8 DPBW03W8	2.2uF/100V X7R 10% R TDK 1210	15μH	2.2uF/100V X7R 10% R TDK 1210	68μH
	BS EN/EN55032 Class A(Radiation)		BS EN/EN55032 Class B(Radiation)	
	C1	L1	C1	L1
	NC	NC	2.2uF/100V X7R 10% R TDK 1210	68μH

**Mechanical Specification**

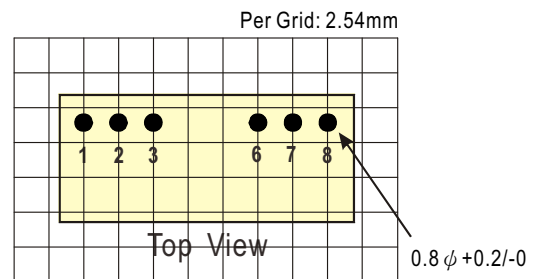
- All dimensions in mm(inch)
- Tolerance:  $x.xx \pm 0.5mm (x.xx \pm 0.02")$
- Pin pitch tolerance:  $\pm 0.05mm (\pm 0.002")$



**Plug Assignment**

Pin-Out		
Pin No.	SPBW03W8 (Single output)	DPBW03W8 (Dual output)
1	-Vin	-Vin
2	+Vin	+Vin
3	R.C.	R.C.
6	+Vout	+Vout
7	-Vout	Common
8	N.C.	-Vout

\* N.C. : No connected



■ Packing

Standard Tube Packing	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
<p>Unit : mm</p> <p>330</p> <p>11.6 10.4 12.8</p> <p>Product</p> <p>Tube Nails</p> <p>Tube pattern</p> <p>W</p> <p>H</p> <p>L</p> <p>CARTON L390.9 x W284.8 x H175.7</p>	14	78.7g	2058	13.57Kg

■ Installation Manual

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

 [www.simpex.ch](http://www.simpex.ch)

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