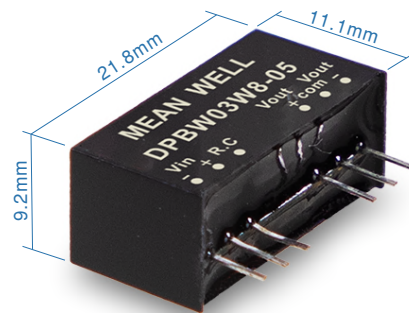
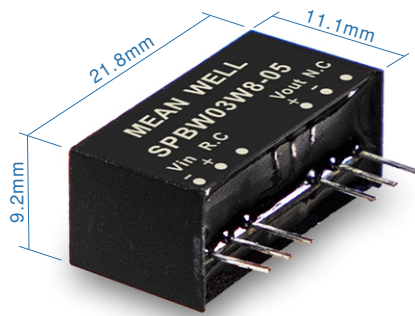




3W SIP Package 8:1 Ultra-Wide Input DC-DC Regulated Converter **SPBW03W8 & DPBW03W8** series



■ 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 $\pm 5V/\pm 12V/\pm 15V$ 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

Output voltage (3.3/5/12/15Vdc , $\pm 5/\pm 12/\pm 15Vdc$)

8:1(9~75Vdc) Wide input voltage

Rated wattage

Series name { S:Single output
D: Dual output



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%	1800μF
SPBW03W8-05		4mA	77mA	5V	0 ~ 600mA	81%	1000μF
SPBW03W8-12		8mA	74mA	12V	0 ~ 250mA	85%	220μF
SPBW03W8-15		12mA	76mA	15V	0 ~ 200mA	83%	120μF
DPBW03W8-05		8mA	77mA	±5V	±0 ~ 300mA	81%	*470μF
DPBW03W8-12		12mA	76mA	±12V	±0 ~ 125mA	83%	*100μF
DPBW03W8-15		12mA	75mA	±15V	±0 ~ 100mA	84%	*47μF

* For each output

SPECIFICATION

INPUT

VOLTAGE RANGE	9~75Vdc
SURGE VOLTAGE (100ms max.)	100Vdc
FILTER	Internal capacitor
PROTECTION	Fuse recommended. 1A Slow-Blow.
INTERNAL POWER DISSIPATION	500mW

OUTPUT

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

PROTECTION

SHORT CIRCUIT	Protection type : Continuous, automatic recovery
OVERLOAD	110 ~ 230% rated output power Protection type : Recovers automatically after fault condition is removed
UNDER VOLTAGE	Start-up voltage 8.8Vdc Shutdown voltage 8Vdc (Typ.)

FUNCTION

REMOTE CONTROL	Power ON: R.C. ~ -Vin open circuit ; Power OFF: R.C. ~ -Vin <1.2Vdc or short
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ENVIRONMENT

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

SAFETY & EMC (Note.5)

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	Parameter	Standard	Test Level / Note
	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	Parameter	Standard	Test Level / Note
	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

OTHERS

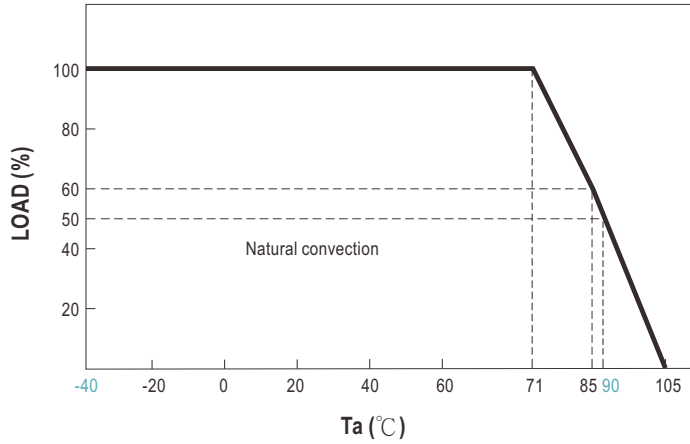
MTBF	1850Khrs MIL-HDBK-217F(25°C)
DIMENSION (L*W*H)	21.8*9.2*11.1mm (0.86*0.36*0.44 inch)
CASE MATERIAL	Non-Conductive black plastic (UL 94V-0 rated)
PACKING	4.8g ; 14pcs/per tube, 2058pcs/147 tube/per carton

NOTE

- 1.All parameters are specified at normal input (48Vdc), rated load, 25°C 70% RH ambient.
- 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf & 47µf capacitor.
- 3.Line regulation is measured from low line to high line at rated load.
- 4.Load regulation is measured from 0% to 100% rated load.
- 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>)

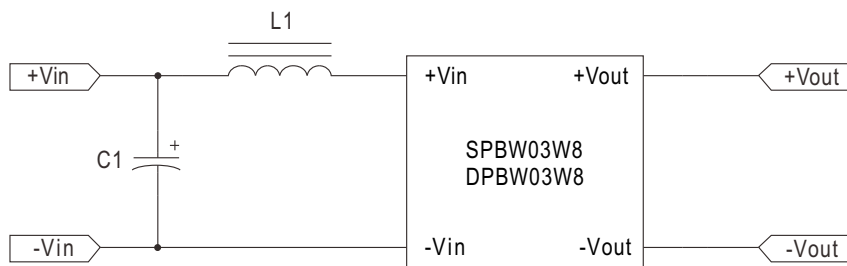
※ Product Liability Disclaimer : For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

Derating Curve



EMC Suggestion Circuit

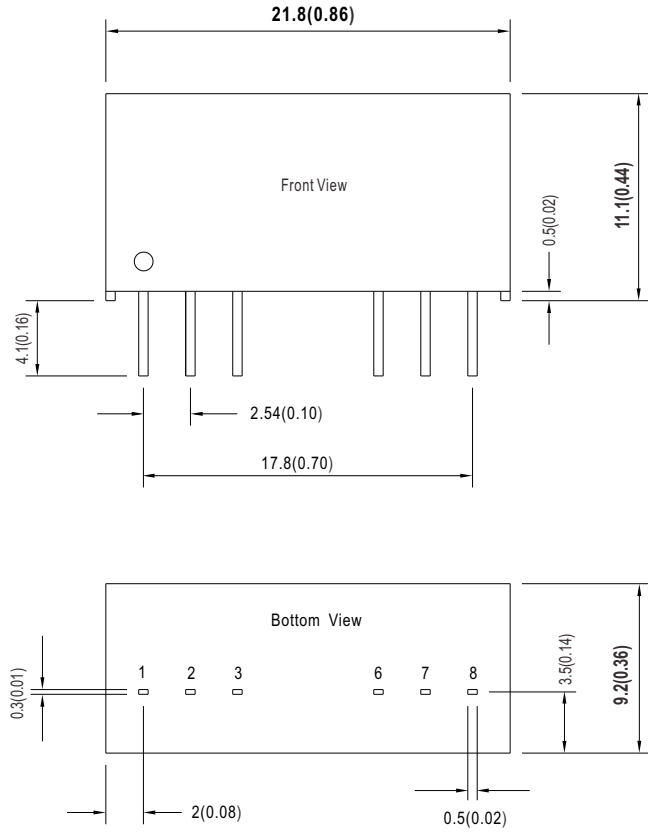
※ EMC Considerations EMI Test standard: BS EN/EN55032 Class A/B Conduct and BS EN/EN55032 Class B Radiation test conditions
recommendations: Input Voltage: Nominal, Output Load: Full Load



Model No.	BS EN/EN55032 Class A(Conduction)		BS EN/EN55032 Class B(Conduction)	
SPBW03W8 DPBW03W8	C1	L1	C1	L1
	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

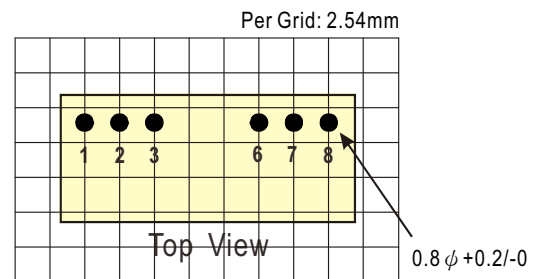
- All dimensions in mm(inch)
- Tolerance: $x.x \pm 0.5\text{mm}$ ($x.xx \pm 0.02"$)
- Pin pitch tolerance: $\pm 0.05\text{mm}$ ($\pm 0.002"$)



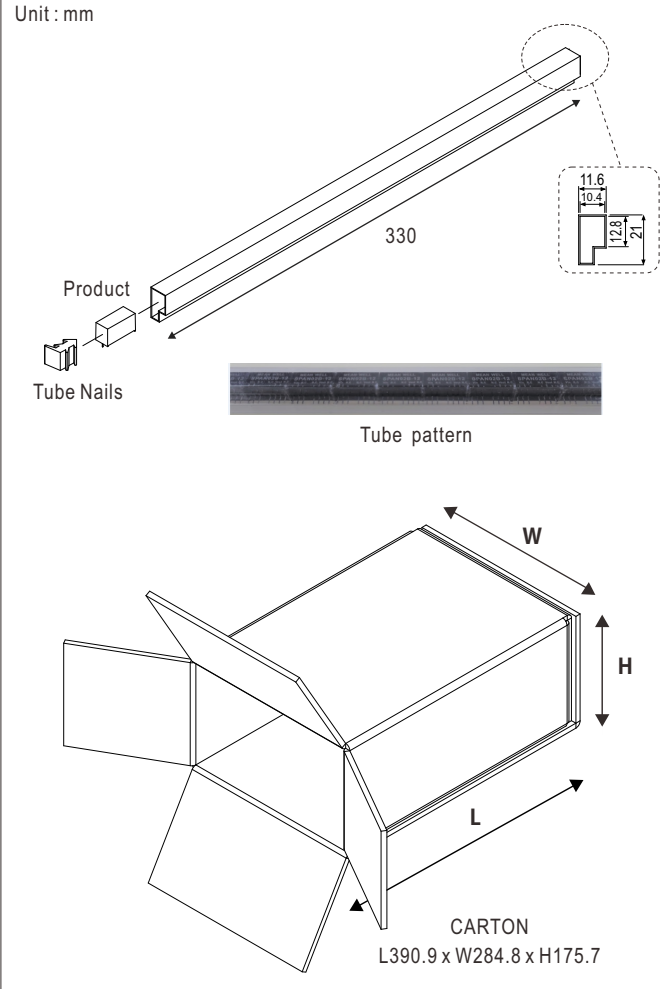
Plug Assignment

Pin-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.
Unit : mm  Product Tube Nails 330 11.6 10.4 12.8 Z1 Tube pattern W H L CARTON L390.9 x W284.8 x H175.7	14	78.7g	2058	13.57Kg

■ Installation Manual

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