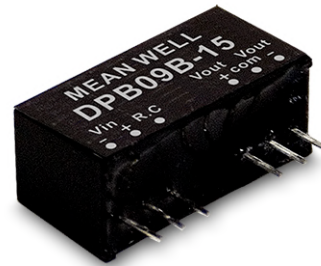
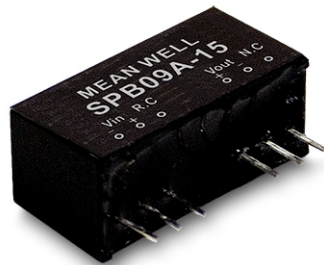




9W SIP Package 8:1 Ultra-Wide Input DC-DC Regulated Converter

SPB09W8 & DPB09W8 series



TPTC004



■ 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
- High efficiency up to 87%
- Protections: Short circuit (Continuous) / Overload / UVLO
- 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

SPB09W8 and DPB09W8 series are 9W isolated and regulated module type DC-DC converter with SIP8 package. It features international standard pins, a high efficiency up to 87%, wide working temperature range -40~+90°C, 1.5KVdc I/P-O/P isolation voltage, continuous-mode short circuit protection, etc. The models account for different input voltage 9~75Vdc 8:1 ultra-wide input range, and various output voltage, 3.3V/5V/9V/12V/15V/24V 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

SPB 09 W8 - 12

Output voltage (3.3/5/9/12/15/24Vdc , $\pm 5/\pm 12/\pm 15Vdc$)

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

Rated wattage

Series name { S:Single output
D: Dual output

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				
SPB09W8-03	Nominal 12V, 24V,36V,48V,72V (9 ~ 75V)	10mA	339mA	3.3V	0 ~ 2000mA	81%	680μF
SPB09W8-05		10mA	401mA	5V	0 ~ 1600mA	83%	680μF
SPB09W8-09		10mA	436mA	9V	0 ~ 1000mA	86%	470μF
SPB09W8-12		10mA	431mA	12V	0 ~ 750mA	86%	470μF
SPB09W8-15		10mA	431mA	15V	0 ~ 600mA	86%	220μF
SPB09W8-24		10mA	431mA	24V	0 ~ 375mA	87%	100μF
DPB09W8-05		10mA	397mA	±5V	±0 ~ 800mA	82%	±330μF
DPB09W8-12		10mA	431mA	±12V	±0 ~ 375mA	87%	±150μF
DPB09W8-15		10mA	431mA	±15V	±0 ~ 300mA	86%	±100μF

* For each output



SPECIFICATION

INPUT			
VOLTAGE RANGE		9~75Vdc	
SURGE VOLTAGE (100ms max.)		100Vdc	
FILTER		Pinetwork	
PROTECTION		Fuse recommended. 2A Slow-Blow	
OUTPUT			
VOLTAGE ACCURACY		±2%	
RATED POWER		9W	
RIPPLE & NOISE Note.2		3.3~9V: 100mV Vp-p max. 12~24V: 1% Output Vp-p max.	
LINE REGULATION Note.3		0.5%	
LOAD REGULATION Note.4		Single output models: ±0.5% (±1% for 3.3Vout model), Dual output models: ±0.5%	
CROSS DEGUATION		±5% @ 25%~100% Load only dual output	
SWITCHING FREQUENCY (Min.)		300KHz	
PROTECTION			
SHORT CIRCUIT		Protection type : Continuous, automatic recovery	
OVERLOAD		120 ~ 230% rated output power	
		Protection type : Recovers automatically after fault condition is removed	
FUNCTION			
REMOTE CONTROL		Power ON: R.C. ~ -Vin >2.5Vdc~30Vdc or open circuit ; Power OFF: R.C. ~ -Vin <1Vdc or short	
UNDER VOLTAGE LOCKOUT		Start-up voltage	8.8Vdc
		Shutdown voltage	8Vdc (Typ.)
ENVIRONMENT			
COOLING		Free-air convection	
WORKING TEMP.		-40 ~ +90℃ (Refer to "Derating Curve")	
CASE TEMPERATURE		+115℃ max.	
WORKING HUMIDITY		20% ~ 90% RH non-condensing	
STORAGE TEMP., HUMIDITY		-55 ~ +125℃, 10 ~ 95% RH non-condensing	
TEMP. COEFFICIENT		0.05% / °C (0 ~ 70℃)	
SOLDERING TEMPERATURE		1.5mm from case of 3 ~ 5sec./260℃ 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 (EAC TP TC 004 for 48Vin type only) approved	
WITHSTAND VOLTAGE		I/P-O/P:1.5KVdc	
ISOLATION RESISTANCE		I/P-O/P:1000M Ohms / 500Vdc / 25℃ / 70% RH	
ISOLATION CAPACITANCE (Typ.)		80pF	
EMC EMISSION	Parameter	Standard	Test Level / Note
	Conducted	BS EN/EN55032(CISPR32)	N/A
	Radiated	BS EN/EN55032(CISPR32)	Class A with external components
EMC IMMUNITY	Parameter	Standard	Test Level / Note
	ESD	BS EN/EN61000-4-2	Level 3, ±8KV air, Level 2±4KV contact
	Radiated Susceptibility	BS EN/EN61000-4-3	Level 2, 3V/m
	EFT/Bursts	BS EN/EN61000-4-4	Level 2, 0.5KV at power
	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 1, 1A/m
OTHERS			
MTBF		>300Khrs MIL-HDBK-217F(25℃)	
DIMENSION (L*W*H)		24*9.6*11.2mm (0.94*0.38*0.44 inch)	
CASE MATERIAL		Non-Conductive black plastic (UL 94V-0 rated)	
PACKING		5g ; 21pcs/per tube, 2100pcs/100 tube/per carton	

NOTE

1.All parameters are specified at normal input(24Vdc), rated load, 25℃ 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>

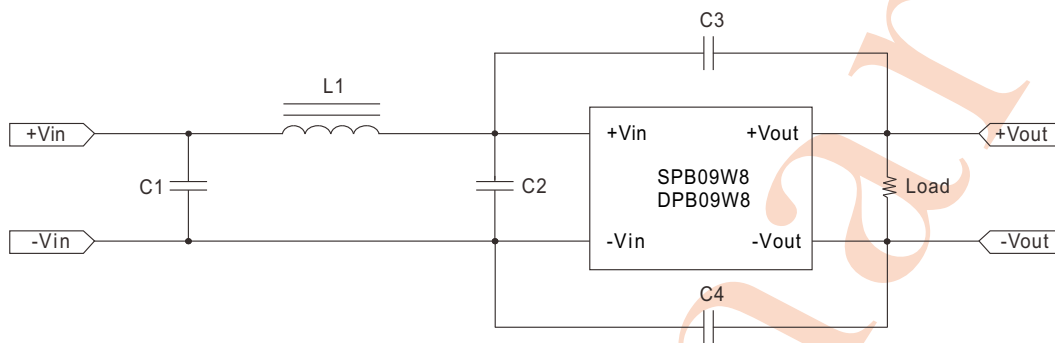
Remote ON/OFF Control

Remote On/Off Control			
Control Input	Pin3	Control Common	Pin1
Control Voltage		Converter Shutdown Idle Current	10mA
ON	>+2.5~30Vdc or Open Circuit	Logic Compatibility	CMOS or Open
OFF	<+1.0Vdc or Jumper Short to Pin1		Collector TTL

EMC Suggestion Circuit

※ EMC Considerations EMI Test standard: BS EN/EN55032 Class A radiated test conditions recommendations:

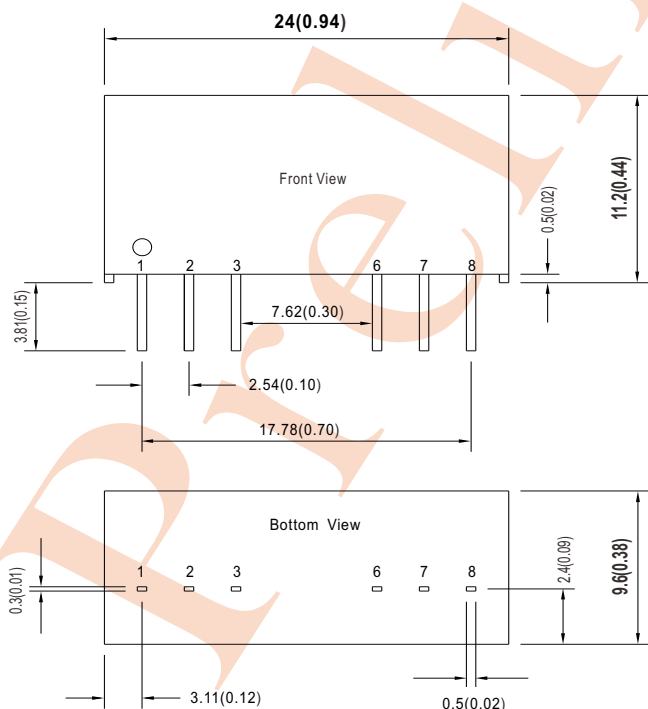
Input Voltage: Nominal, Output Load: Full Load



Model No.	BS EN/EN55032 Class A				
	C1	C2	C3	C4	L1
SPB09W8 DPB09W8	X	2.2μF/100V MLCC	102/3KV	102/3KV	X

Mechanical Specification

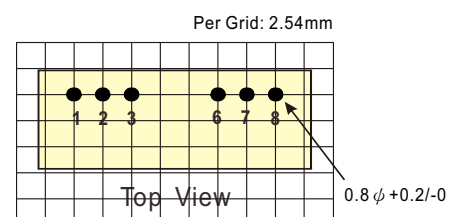
- All dimensions in mm(inch)
- Tolerance: x.x±0.5mm(x.xx±0.02")
x.xx±0.25mm(x.xxx±0.010")
- Pin size is 0.50x0.30mm (0.02" x0.01")
- Pin pitch tolerance: ±0.05mm (±0.002")



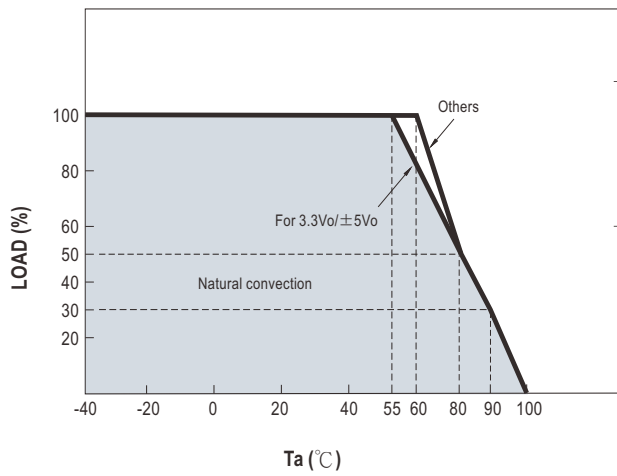
Plug Assignment

Pin-Out		
Pin No.	SPB09W8 (Single output)	DPB09W8 (Dual output)
1	-Vin	-Vin
2	+Vin	+Vin
3	R.C.	R.C.
6	+Vout	+Vout
7	-Vout	Common
8	N.C.	-Vout

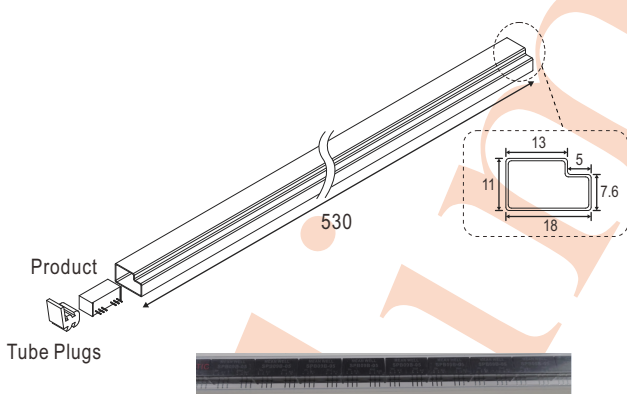
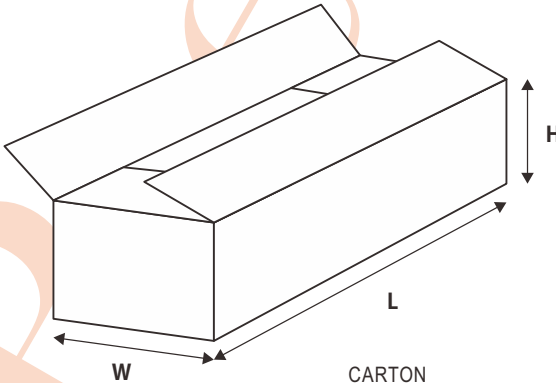
* N.C. : No connected



Derating Curve



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 Plugs  Tube pattern  CARTON L620 x W230 x H230	21	125g	2100	13.3Kg

Installation Manual

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