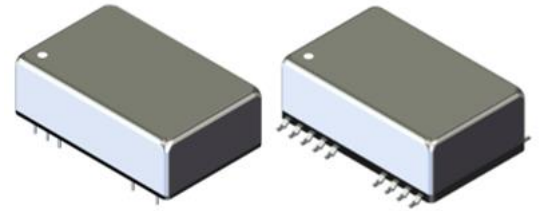


Features

- 8 Watts output power (PWM Design)
- 2:1 Wide input voltage range
- 2KVDC isolation ("H" means 3KVDC)
- Remote On/Off control
- Continuous short circuit protection
- UL1950 component recognized
- Standard DIL 24 metal package
- High efficiency up to 87%
- ROHS compliant
- No tantalum capacitors design

Application

- Industrial control system

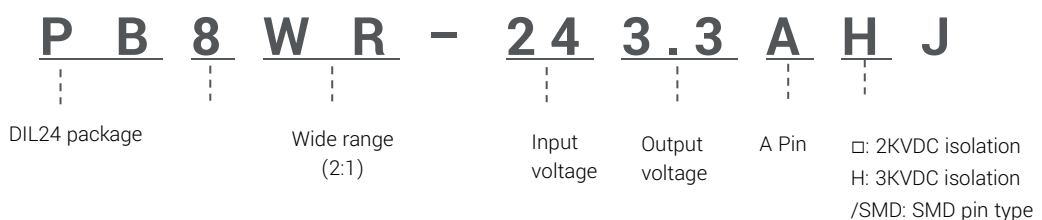


Selection Guide

Part number	Input voltage	Output voltage	Output current @ full load	Efficiency ⁽¹⁾ (typ.)	Capacitive load ⁽²⁾ (max.)
PB8WR-053.3AJ	4.5 - 9 VDC Nom. 5VDC	3.3 VDC	1600 mA	83%	2200µF
PB8WR-0505AJ		5 VDC	1600 mA	85%	2200µF
PB8WR-0512AJ		12 VDC	666 mA	84%	470µF
PB8WR-0515AJ		15 VDC	533 mA	84%	220µF
PB8WR-0512DAJ		±12 VDC	±333 mA	84%	±220µF
PB8WR-0515DAJ		±15 VDC	±267 mA	84%	±100µF
PB8WR-123.3AJ	9 - 18 VDC Nom. 12VDC	3.3 VDC	1600 mA	84%	2200µF
PB8WR-1205AJ		5 VDC	1600 mA	86%	2200µF
PB8WR-1212AJ		12 VDC	666 mA	85%	470µF
PB8WR-1215AJ		15 VDC	533 mA	85%	220µF
PB8WR-1205DAJ		±5 VDC	±800 mA	83%	±1000µF
PB8WR-1212DAJ		±12 VDC	±333 mA	85%	±220µF
PB8WR-1215DAJ	±15 VDC	±267 mA	85%	±100µF	
PB8WR-243.3AJ	18 - 36 VDC Nom. 24VDC	3.3 VDC	1600 mA	85%	2200µF
PB8WR-2405AJ		5 VDC	1600 mA	87%	2200µF
PB8WR-2412AJ		12 VDC	666 mA	86%	470µF
PB8WR-2415AJ		15 VDC	533 mA	86%	220µF
PB8WR-2405DAJ		±5 VDC	±800 mA	84%	±1000µF
PB8WR-2412DAJ		±12 VDC	±333 mA	86%	±220µF
PB8WR-2415DAJ	±15 VDC	±267 mA	86%	±100µF	
PB8WR-483.3AJ	36 - 75 VDC Nom. 48VDC	3.3 VDC	1600 mA	85%	2200µF
PB8WR-4805AJ		5 VDC	1600 mA	87%	2200µF
PB8WR-4812AJ		12 VDC	666 mA	86%	470µF
PB8WR-4815AJ		15 VDC	533 mA	86%	220µF
PB8WR-4805DAJ		±5 VDC	±800 mA	84%	±1000µF
PB8WR-4812DAJ		±12 VDC	±333 mA	86%	±220µF
PB8WR-4815DAJ	±15 VDC	±267 mA	86%	±100µF	

1. The efficiency is test by nominal input and max. full load @25°C.
2. The capacitive load is test by minimum input and constant resistive load.
3. All specifications valid at nominal input voltage, full load and 25°C after warm-up time unless otherwise stated.
4. The product information and specifications are subject to change without prior notice.

Part Number



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Specifications

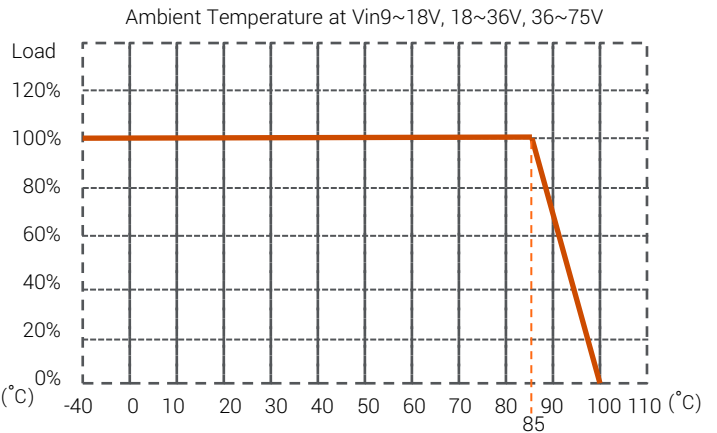
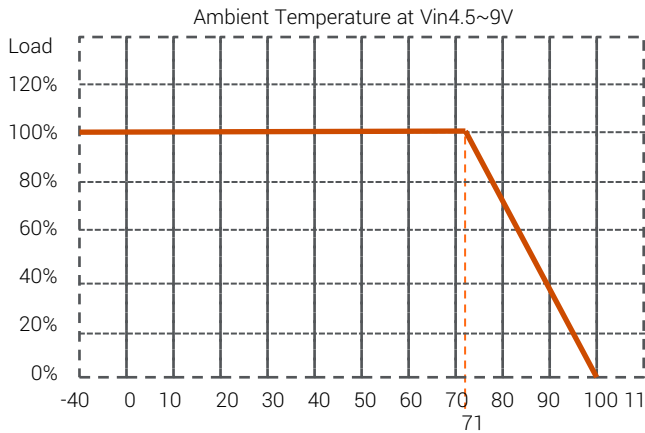
	Parameter	Conditions	Min.	Typ.	Max.	Unit	
Input	Input voltage range			2:1			
	Input filter			Pi type			
	Start-up time	At nominal Vin		300		ms	
	Remote ON/OFF ⁽¹⁾	DC/DC ON DC/DC OFF		Open or 3.5V < Vr < 12V Short or 0V < Vr < 1.2V			
Output	Voltage accuracy	Full load & nominal Vin			±1.5	%	
	Line voltage regulation	Low line to hi line at full load			±0.5	%	
	Load voltage regulation (25% to 100% load)	Single				±0.5	%
		Dual				±1.2	%
	Cross regulation ⁽²⁾	25%-100% load				±5	%
	Ripple & noise ⁽³⁾	@20MHz BW				50	mVp-p
	Operating frequency			330		KHz	
Environment	Operating temperature	With derating	-40		100	°C	
	Storage temperature		-55		105	°C	
	Max. case temperature				100	°C	
	Temperature coefficient		-0.05		+0.05	%/°C	
	Relative Humidity		5		95	%RH	
	MTBF	25°C	1200			KHours	
	Vibration			MIL-STD-202G			
Function	Isolation voltage	Input to output (1 sec.)	2000			VDC	
		H	3000			VDC	
	Isolation resistance		1			GΩ	
	Isolation capacitance			1200		pF	
	Over load protection	Full load & nominal Vin			150	%	
	Short Circuit Protection				Continuous, automatic recovery		
Safety				UL60950-1/EN60950-1			
Physical	Case material			Nickel plated copper			
	Base material			Non-conductive black plastic			
	Potting material			Epoxy (UL94V-0)			
	Dimension	(L x W x H)		32.00x20.30x10.20 mm			
	Weight				18	g	
EMC	EMI ⁽⁴⁾	EN55022		Class A/B			
	ESD	EN61000-4-2, Air±8kV; Contact±6kV		Criteria A			
	Radiated immunity	EN61000-4-3, 10 V/m		Criteria A			
	Fast transient	EN61000-4-4, ± 2kV		Criteria A			
	Surge	EN61000-4-5, ± 2kV		Criteria A			
	Conducted immunity	EN61000-4-6, 10 Vr.m.s		Criteria A			
	PMF	EN61000-4-8, 50Hz 1A/m (r.m.s)		Criteria A			

1. The ON/OFF control pin voltage is referenced to negative input.
2. One load is 25% to 100% load, the other load is 100% load, the output voltage variable rate is within ±5%.
3. Measured with 20MHz bandwidth and 0.1uF ceramic capacitor.
4. Requires external filter to meet EN55022 class A/B.

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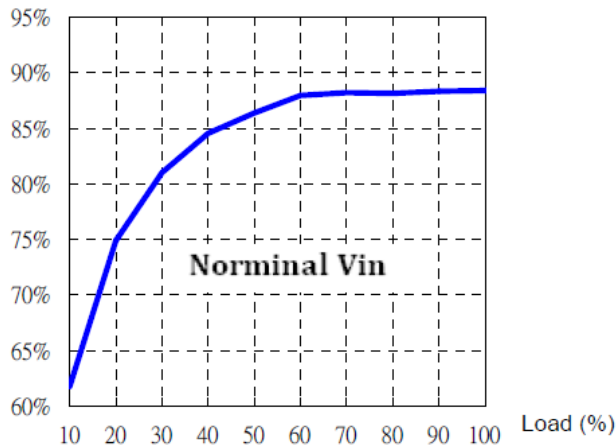
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Derating Curve



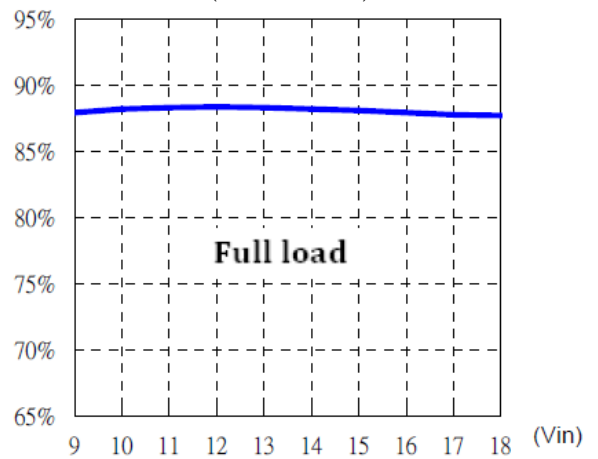
Efficiency vs Output load

(PB8WR-1205AJ)



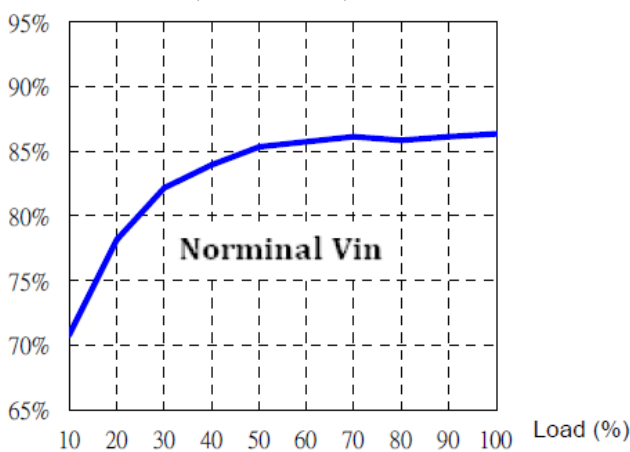
Efficiency vs Input voltage

(PB8WR-1205AJ)



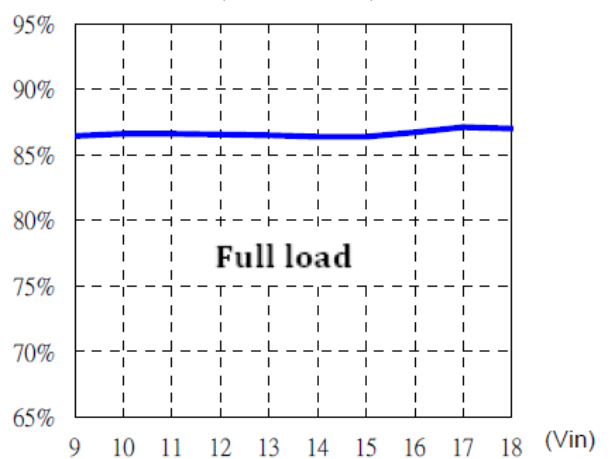
Efficiency vs Output load

(PB8WR-1212AJ)



Efficiency vs Input voltage

(PB8WR-1212AJ)

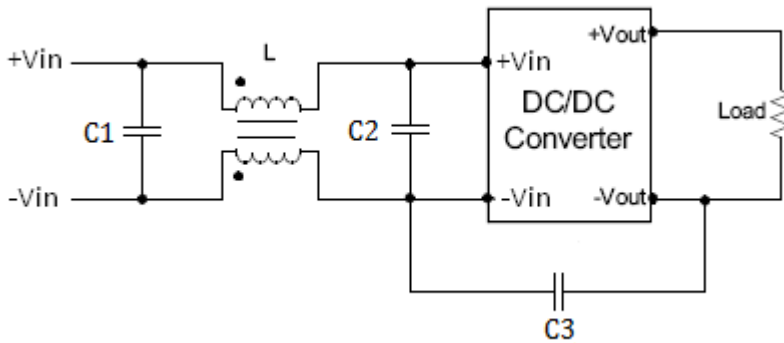


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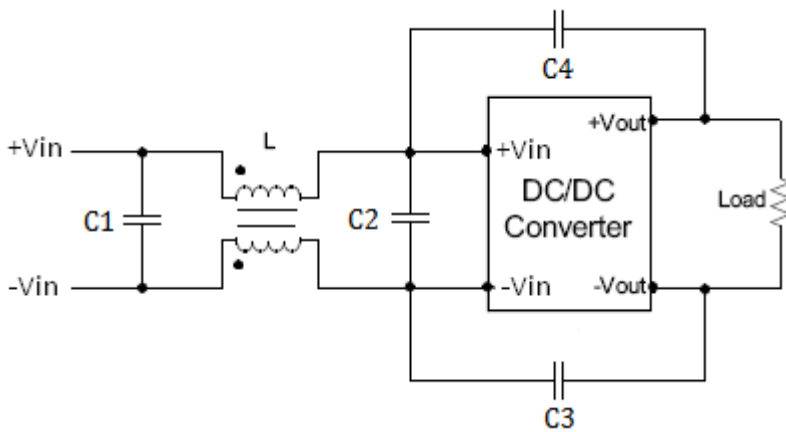
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EMI Suggestion

< 1 > Single output

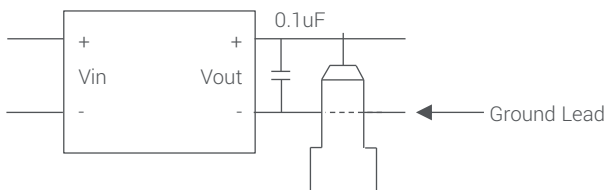


< 2 > Dual output



Part No.	L	C1	C2	C3&C4
PB8WR-05xxAJ/DAJ	1.3 mH	22uF/16V	22uF/16V	2200pF/3KV MLCC
PB8WR-12xxAJ/DAJ		10uF/25V	10uF/25V	2200pF/3KV MLCC
PB8WR-24xxA/DAJ	Common Choke	4.7uF/50V	4.7uF/50V	2200pF/3KV MLCC
PB8WR-48xxAJ/DAJ		2.2uF/100V	2.2uF/100V	2200pF/3KV MLCC

Ripple & Noise Measure Method

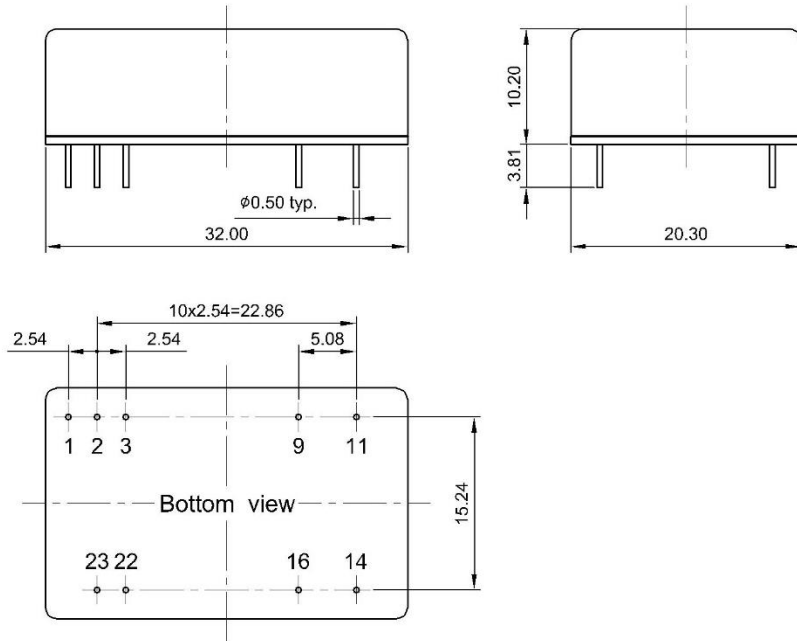


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Mechanical Dimension & Pinning

● DIP



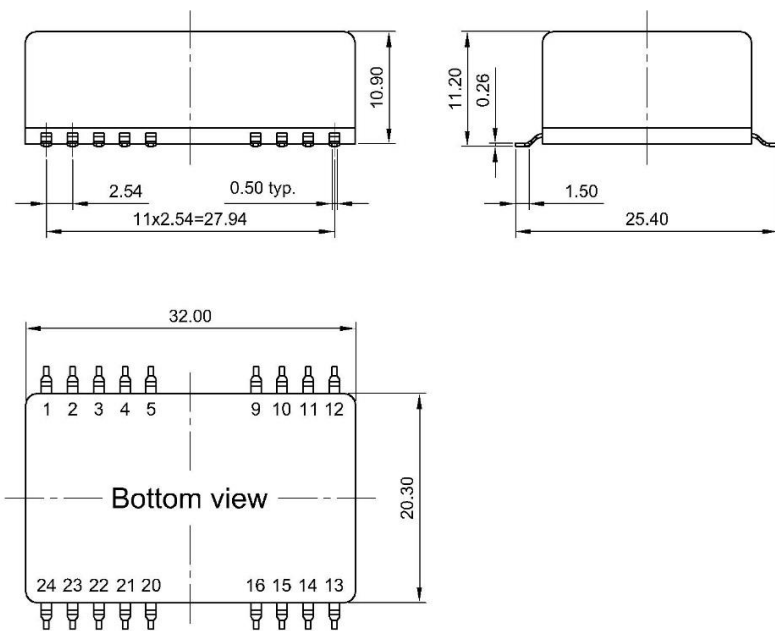
Pin	Single	Dual
1	CTRL	CTRL
2, 23	+Vin	+Vin
2, 3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com

NC : No connection

Pin : ±0.05mm

Tolerance : ±0.25mm

● SMD

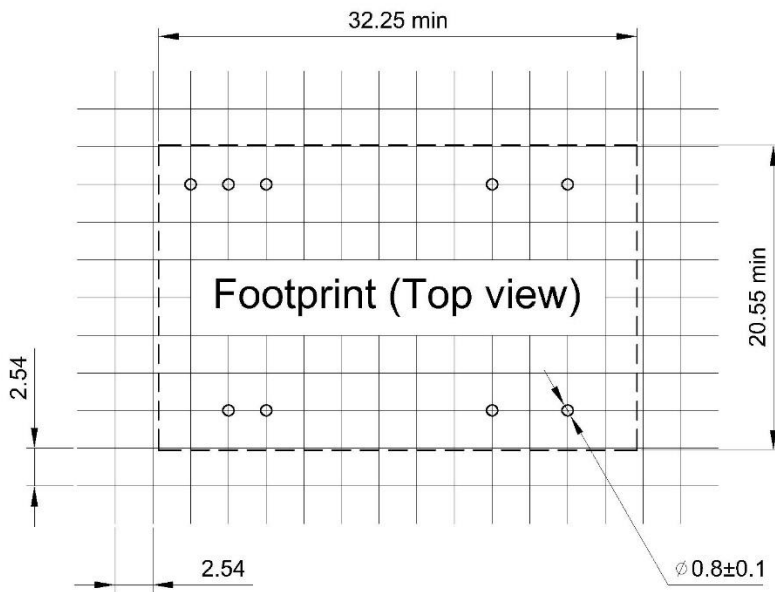


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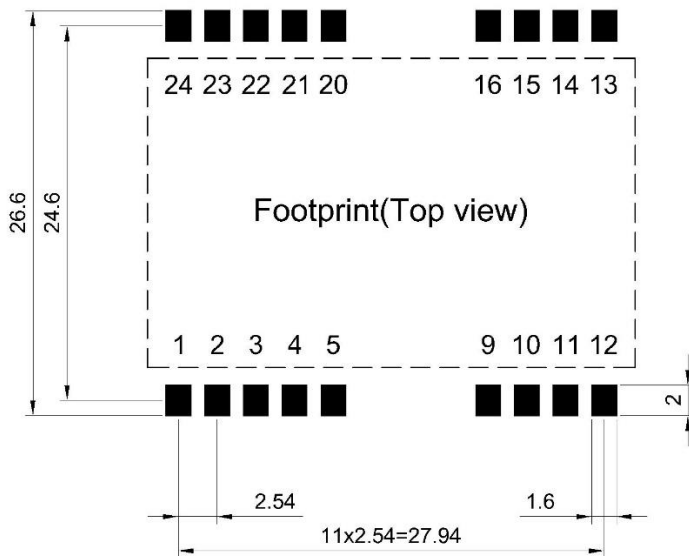
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Recommend Footprint

- DIP



- SMD



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