

-12V/100mA Output

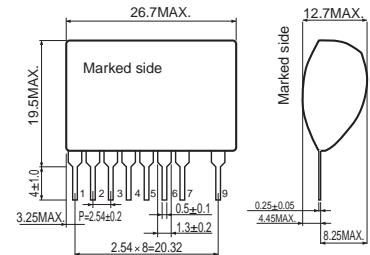
Negative DC/DC Converter (Non-isolated)

BP5122

Absolute Maximum Ratings

Parameter	Symbol	Limits	Unit
Input voltage	V_i	24	V
Output Current	I_o	0.1	A
Operating temperature range	T_{opr}	-15 to +70	°C
Storage temperature range	T_{stg}	-25 to +85	°C

Dimensions (Unit : mm)



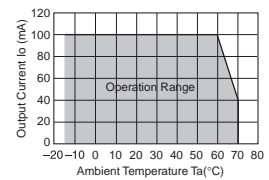
Electrical Characteristics

($V_i=15V$, $I_o=0.05A$, $SW=1$, $T_a=25^\circ C$ unless otherwise noted)

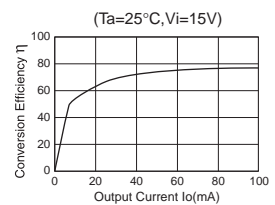
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V_i	8	-	20	V	
output voltage	V_o	-12.8	-12.0	-11.2	V	
Rated output current	I_o	0.01	-	0.1	A	See Derating Curve.
Line regulation	ΔV_{o1}	-	2	80	mV	$V_i=8V$ to 20VDC
Load regulation	ΔV_{o2}	-	5	80	mV	$I_o=0.01A$ to 0.1A
Output ripple voltage	$\Delta \gamma$	-	10	80	mVpp	*1
Power conversion efficiency	η	60	70	-	%	
Switching Frequency	f_{sw}	-	250	-	kHz	

*1:Pulsating noise is not included.

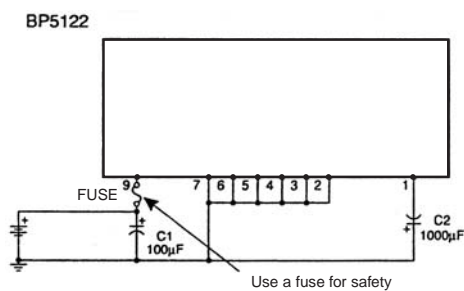
Derating Curve



Conversion Efficiency



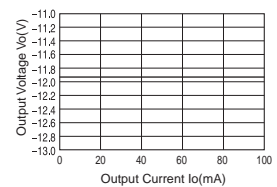
Sample Application Circuit



Please verify operation and characteristics in the customer's circuit before actual usage. Ensure that the load current does not exceed the maximum rating.

Pin No.	Terminal name
1	Output Terminal
2	GND
3	GND
4	GND
5	GND
6	GND
7	GND
8	Skip
9	Input Terminal

Load Regulation



External Component Settings

- C1: PL series / Nichicon Ripple current 1Arms or greater
100 to 4700µF /50V
- C2: PL series / Nichicon Ripple current 0.4Arms or greater
470 to 2200µF /50V
- FUSE : Use a quick-acting fuse (2A)

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