

-12V/100mA Output

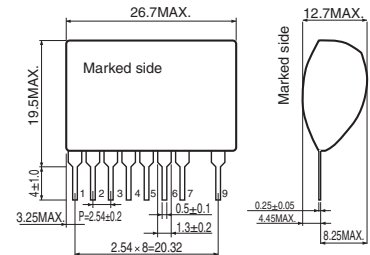
# Negative DC/DC Converter (Non-isolated)

**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)



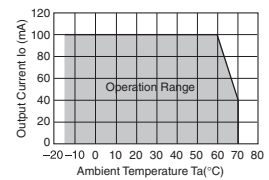
## ● Electrical Characteristics

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

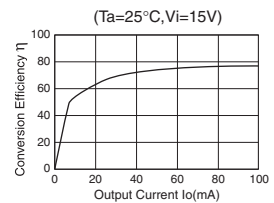
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_i$	8	-	20	V	
output voltage	$V_o$	-12.8	-12.0	-11.2	V	
Rated output current	$I_o$	0.01	-	0.1	A	See Derating Curve.
Line regulation	$\Delta V_{o1}$	-	2	80	mV	$V_i=8V$ to 20VDC
Load regulation	$\Delta V_{o2}$	-	5	80	mV	$I_o=0.01A$ to 0.1A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

\*1:Pulsating noise is not included.

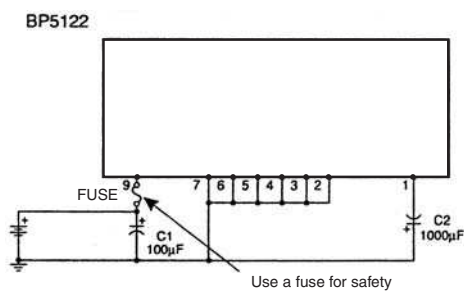
## ● Derating Curve



## ● Conversion Efficiency



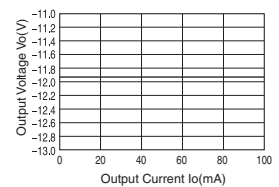
## ● Sample Application Circuit



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)