

–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

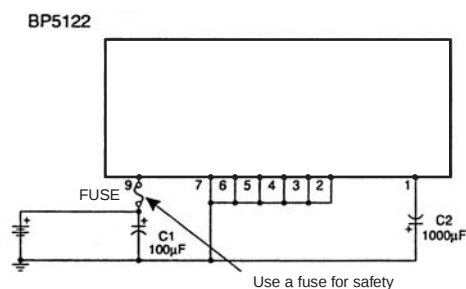
● Electrical Characteristics

($V_i=15V$, $I_o=0.05A$, $SW=1$, $T_a=25^\circ C$ 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.

● Sample Application Circuit

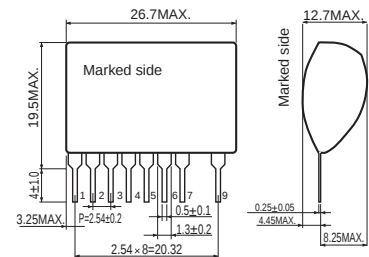


Please verify operation and characteristics in the customer's circuit before actual usage. Ensure that the load current does not exceed the maximum rating.

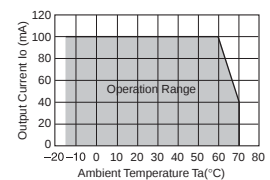
External Component Settings

- 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)

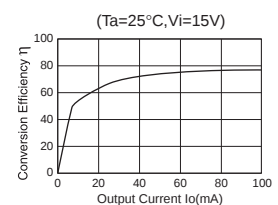
● Dimensions (Unit : mm)



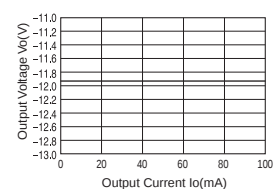
● Derating Curve



● Conversion Efficiency



● Load Regulation



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