–12V/100mA Output

# Negative DC/DC Converter (Non-isolated)

**BP5122**

## ●Absolute Maximum Ratings

| Parameter | Symbol | Limits | Unit |
|---|---|---|---|
| Input voltage | Vi | 24 | V |
| Output Current | Io | 0.1 | A |
| Operating temperature range | Topr | –15 to +70 | °C |
| Storage temperature range | Tstg | –25 to +85 | °C |

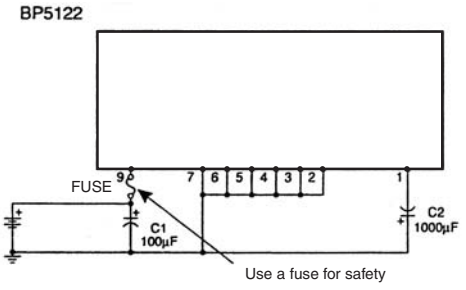
## ●Electrical Characteristics

(Vi=15V, Io=0.05A, SW=1, Ta=25°C unless otherwise noted)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---|---|---|---|---|---|---|
| Input voltage | Vi | 8 | – | 20 | V | |
| output voltage | Vo | –12.8 | –12.0 | –11.2 | V | |
| Rated output current | Io | 0.01 | – | 0.1 | A | See Derating Curve. |
| Line regulation | ΔVo1 | – | 2 | 80 | mV | Vi=8V to 20VDC |
| Load regulation | ΔVo2 | – | 5 | 80 | mV | Io=0.01A to 0.1A |
| Output ripple voltage | Δγ | – | 10 | 80 | mVpp | ∗1 |
| Power conversion efficiency | η | 60 | 70 | – | % | |
| Switching Frequency | fsw | – | 250 | – | kHz | |

∗1:Pulsating noise is not included.

## ●Sample Application Circuit



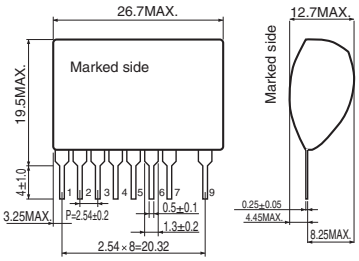

Please verify operation and characteristics in the customer's circuit before actual usage. Ensure that the load current does not exceed the maximum rating.

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

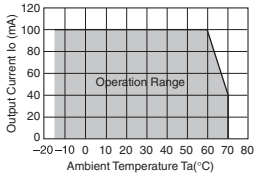
External Component Settings

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)

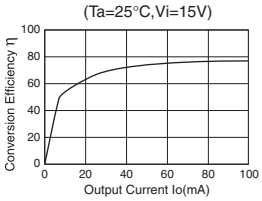
## ● Dimensions (Unit : mm)



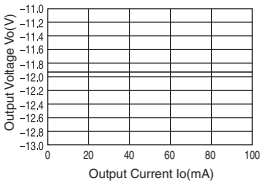

## ●Derating Curve




## ●Conversion Efficiency




## ●Load Regulation





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