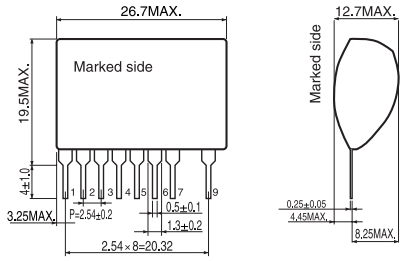
DC/DC converter — BP5122

–12 V/100 mA output

●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

●Dimensions (mm)

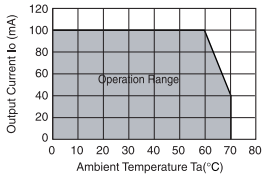


●Electrical Characteristics

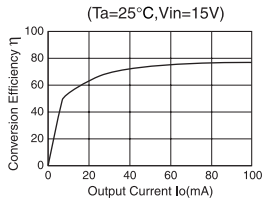
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	Vi	8	–	20	V	
output voltage	Vo	–12.8	–12.0	–11.2	V	
Rated output current	Io	0.01	–	0.1	A	See Derating Curve.
Line regulation	ΔVo1	–	2	80	mV	Vi=8V –20VDC Io=0.1A
Load regulation	ΔVo2	–	5	80	mV	Io=0.01 A – 0.1A
Output ripple voltage	Δγ	–	10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

*1:Pulsating noise is not included.

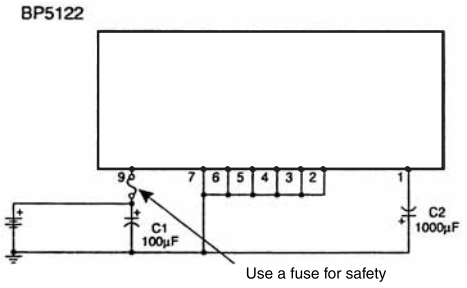
●Derating Curve



●Conversion Efficiency



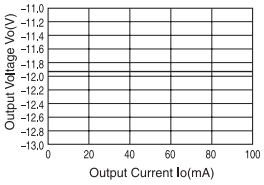
●Sample Application Circuit



Verify proper operation under actual conditions before use. In particular, confirm that the load current does not exceed the maximum rating.

Pin No.	Terminal name
1	Vo
2	GND
3	GND
4	GND
5	GND
6	GND
7	GND
8	Skipped
9	Vin

●Load Regulation



External Component Settings

C1: Input Capacitor	Capacitance: 100-470µF, Rated Voltage: 50V. Low impedance type recommended.
C2: Output Capacitor	Capacitance: 470-1000µF, Rated Voltage: 50V
FUSE: Fuse	Use a fast-acting, 2A fuse

Power Module Usage Precautions

Safety Precautions

1) The products are designed and manufactured for use in ordinary electronic equipment (i.e. AV/OA/ telecommunication/amusement equipment, home appliances). Please consult with the Company's (ROHM) sales staff if intended for use in devices requiring high reliability (e.g. medical/transport/ aircraft/spacecraft equipment, nuclear power/fuel controllers, automotive/safety devices) and whose malfunction may result in injury or death. In this case, failsafe measures must be taken, including the following:
   [a] Installation of protection circuits in order to improve system safety
   [b] Incorporation of redundant circuits in the case of single-circuit failure
2) The products are designed for use under normal conditions. Application in special environments can cause a deterioration in product performance. Therefore, verification and confirmation of product performance, prior to use, is recommended. The following environments are considered to be 'special':
   [a] Outdoors, exposed to direct sunlight or dust
   [b] In contact with liquids, such as water, oils, chemicals, or organic solvents
   [c] In areas where exposure to the sea air or corrosive gases (i.e. Cl_2, H_2S, NH_3, SO_2, NO_2) can occur
   [d] In places where the products may be in contact with static electricity or electromagnetic waves
   [e] In proximity to heat-producing items, plastic cords, or flammable materials
   [f] In contact with sealing or coating products, such as resin
   [g] In contact with unclean solder or exposed to water or water-soluble cleaning agents used after soldering
   [h] In areas where dew condensation occurs
3) The products are not designed to be radiation resistant
4) The Company is not responsible for any problems resulting from use of the products under conditions not recommended herein.
5) The Company should be notified of any product safety issues. Moreover, product safety issues should be periodically monitored by the customer.

Application Notes

1) A sufficient margin must be allowed if changes are made to the peripheral circuit due to variations in the inherent tolerances of the external components as well as transient and static characteristics. In addition, please be aware that the Company has not conducted investigations on whether or not particular changes in the example application circuits would result in patent infringement.
2) The application examples, their constants, and other types of information contained herein are applicable only when the products are used in accordance with standard methods.
   Therefore, if mass production is intended, sufficient consideration to external conditions must be made.

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   [a] Infringement of the intellectual property rights of a third party
   [b] Problems arising from the use of the products listed herein
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In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.