

DC / DC converter

BP5027A

The BP5027A is a DC / DC converter that contains control circuits, switching devices, rectifiers and coils, and operates by only connecting an I / O smoothing capacitor. With no heat sink required, the module is available in stand-alone 6pin SIP packages.

●Applications

Household appliances such as TVs, VCRs, audio equipment, refrigerators and facsimiles

●Features

- 1) Small number of external components required. (2 capacitors)
- 2) Built-in protection circuit for short-circuit.
- 3) Small and light SIP 6pin package.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Input voltage	V _{IN}	24	V
Operating temperature range	T _{opr}	-25~+80	°C
Storage temperature range	T _{stg}	-25~+105	°C

●Recommended operating conditions (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Input voltage	V _{IN}	8	12	20	V

●Electrical characteristics (Unless otherwise noted, Ta=25°C, V_{IN}=12V, I_O=50mA)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V _{IN}	8	—	20	V	
Output voltage	V _O	4.7	5.0	5.3	V	
Output current	I _O	0	—	150	mA	
Line regulation	V _L	—	0.06	0.15	V	V _{IN} =8~20V
Load regulation	V _R	—	0.04	0.15	V	I _O =0~100mA
Output ripple voltage	V _p	—	0.07	0.15	V _{PP}	I _O =100mA
Power conversion efficiency	η	65	74	—	%	I _O =150mA

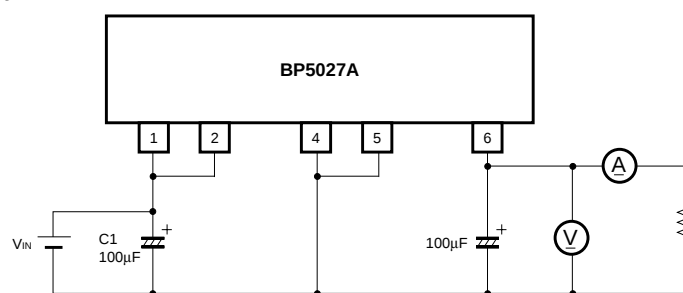
Power module

●Pin descriptions

Pin No.	Pin name
1	V _{IN1}
2	V _{IN2}
4	GND
5	GND
6	V _{OUT}

Pin 3 is removed.

●Measurement circuit



Use a low-impedance product for switching power supplies for the output capacitor.

Fig.1

●Electrical characteristic curves

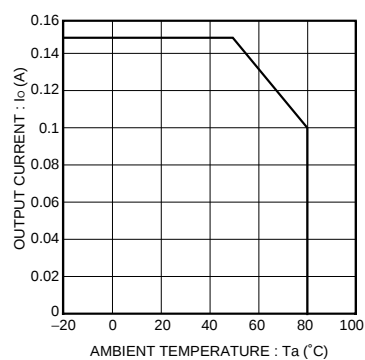


Fig.2 Derating curve

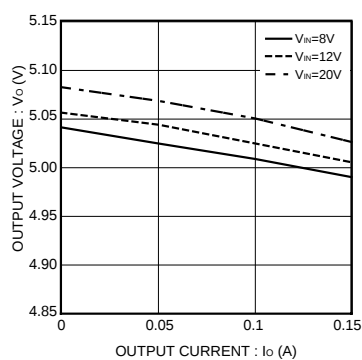


Fig.3 Output characteristic

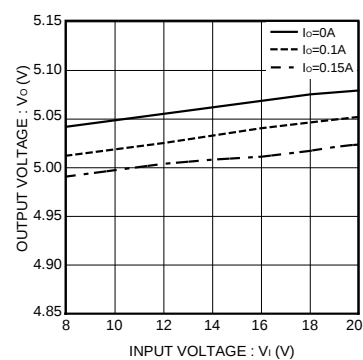


Fig.4 Line regulation

Power module

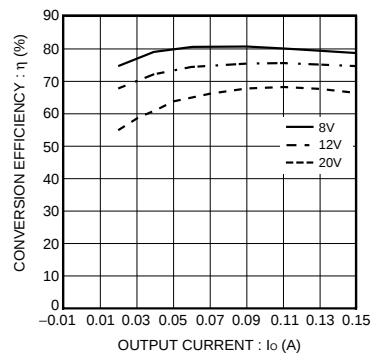


Fig.5 Conversion efficiency

●External dimensions (Units : mm)

