18V/500mA Output

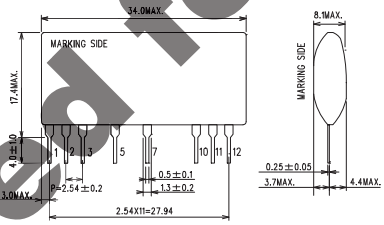
Step-down DC/DC Converter(Non-isolated)

BP5226-18

●Absolute Maximum Ratings

Parameter	Symbol	Limits	Unit	Conditions
Input voltage	Vi	46	V	DC
Operating temperature range	Topr	–20 to +80	°C	Refer to derating curve
Storage temperature range	Tstg	–25 to +105	°C	
Maximum surface temperature	Tcmax	105	°C	(Ambient temperature + the module self-heating)≦Tcmax
Maximum output current	Iomax	500	mApk	

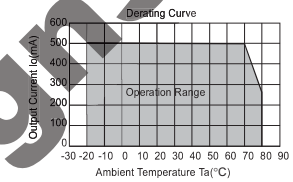
●Dimensions (Unit :mm)



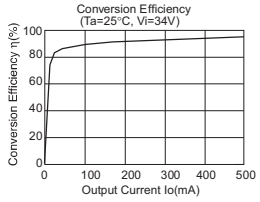
●Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage range	Vi	20	34	46	V	DC
Output voltage	Vo	17.0	18.0	19.0	V	Vi=34V, Io=500mA
Output current	Io	0	–	500	mA	Vi=34V
Line regulation	Vr	–	0.10	0.20	V	Vi=20 to 46V, Io=500mA
Load regulation	Vl	–	0.10	0.20	V	Vi=34V, Io=0 to 500mA
Output ripple voltage	Vp	–	0.05	0.20	Vpp	Vi=34V, Io=500mA
CTL pin OFF voltage	Vctl	3.1	–	14.0	V	SW1 OFF (VoOFF)
CTL pin ON voltage	Vctl(ON)	–	–	0.4	V	SW1 ON (VoON)
CTL terminal pull-up resistance	Rctl	135	150	165	kΩ	
Power conversion efficiency	η	85	90	–	%	Vi=34V, Io=500mA

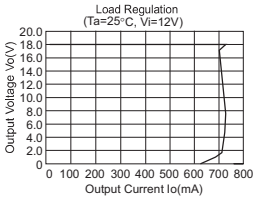
●Derating Curve



●Conversion Efficiency



●Load Regulation



●Application Circuit

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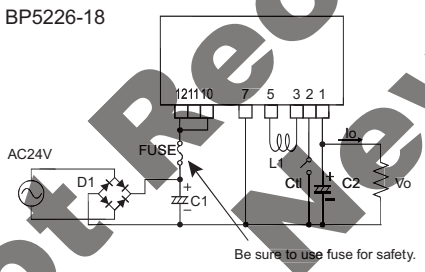

Pin No.	Function
1	Output terminal:Vo(18V)
2	CTL terminal
3	Power inductor terminal
4	Skip
5	Power inductor terminal
6	Skip
7	COMMON
8	Skip
9	Skip
10	Input terminal
11	N.C.
12	Input terminal

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

●Input terminal is 10 and 12.

External Component Specifications

FUSE: fuse	Use a quick-acting fuse (1.8A)
C1: Input capacitor	Above 50V, 470µF to 820µF
C2: Output capacitor	Above 25V, 100µF to 1000µF, low impedance
L1: Power inductor	Inductance 100µH, Rating current:above 1.4A Select components that do not easily get magnetically saturated at high temperature
D1: Diode	Above 60V, current:above 1.0A