

18V/500mA Output

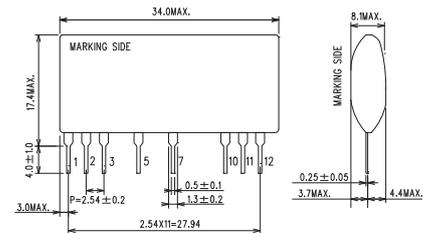
Step-down DC/DC Converter(Non-isolated)

BP5226-18

● Absolute Maximum Ratings

Parameter	Symbol	Limits	Unit	Conditions
Input voltage	V_i	46	V	DC
Operating temperature range	T_{opr}	-20 to +80	°C	Refer to derating curve
Storage temperature range	T_{stg}	-25 to +105	°C	
Maximum surface temperature	T_{cmax}	105	°C	(Ambient temperature + the module self-heating) $\leq T_{cmax}$
Maximum output current	I_{omax}	500	mApk	

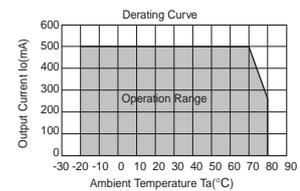
● Dimensions (Unit :mm)



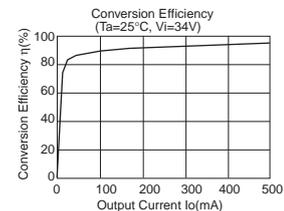
● Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage range	V_i	20	34	46	V	DC
Output voltage	V_o	17.0	18.0	19.0	V	$V_i=34V, I_o=500mA$
Output current	I_o	0	-	500	mA	$V_i=34V$
Line regulation	V_r	-	0.10	0.20	V	$V_i=20$ to 46V, $I_o=500mA$
Load regulation	V_l	-	0.10	0.20	V	$V_i=34V, I_o=0$ to 500mA
Output ripple voltage	V_p	-	0.05	0.20	Vpp	$V_i=34V, I_o=500mA$
CTL pin OFF voltage	V_{ctl}	3.1	-	14.0	V	SW1 OFF (VoOFF)
CTL pin ON voltage	$V_{ctl}(ON)$	-	-	0.4	V	SW1 ON (VoON)
CTL terminal pull-up resistance	R_{ctl}	135	150	165	kΩ	
Power conversion efficiency	η	85	90	-	%	$V_i=34V, I_o=500mA$

● Derating Curve

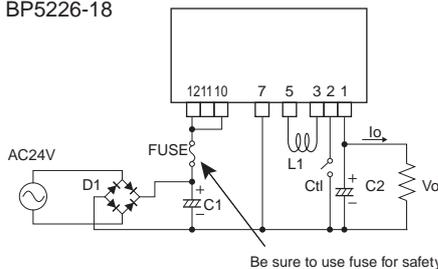


● Conversion Efficiency



● Application Circuit

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Be sure to use fuse for safety.

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

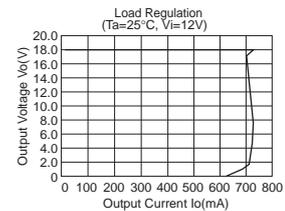
Please verify operation and characteristics in the customer's circuit before actual usage.
Ensure that the load current does not exceed the maximum rating.

- 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

● Load Regulation



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