3.3V/ 300mA Output

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

BP5224-33

●Absolute Maximum Ratings

Parameter	Symbol	Limits	Unit
Input voltage	Vi	24	V
Operating temperature	Topr	−20 to +80	°C
Storage temperature	Tstg	−25 to +105	°C
Maximum surface temperature	Tcmax	105	°C
Maximum output current	Iopeak	300	mA

●Electrical Characteristics

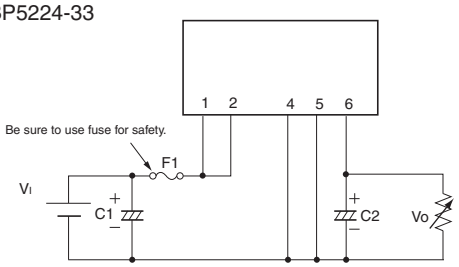
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	Vi	7.0	16.0	18.0	V	DC
Output voltage	Vo	3.14	3.3	3.46	V	
Output current	Io	–	–	300	mA	∗1
Line regulation	Vr	–	0.03	0.10	V	Vi=7 to 18V
Load regulation	VI	–	0.07	0.15	V	Io=0 to 300mA
Output ripple voltage	Vp	–	0.06	0.15	Vp-p	∗2
Power conversion efficiency	η	68	71	–	%	

∗1 Maximum output current varies depending on ambient temperature : please refer to derating curve.

∗2 The output ripple voltage may vary depending on the capacitance, environment, and location of peripheral components. Especially right attention has to be paid to aluminum electrolytic capacitor, because ESR changes greatly at the time of the low temperature and output ripple voltages increase.

●Application Circuit

BP5224-33



Pin No.	Function
1	Input terminal Vi
2	Input terminal Vi
3	Skip
4	GND
5	GND
6	Output terminal Vo

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

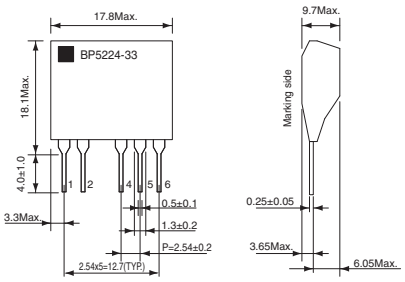
External Component Specifications

F1: FUSE — Be sure to use a fuse for safety.

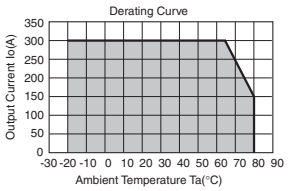
C1: Input capacitor
Rated voltage : More than 50V
Capacitance : more than 100µF, low impedance type
Rated ripple current : More than 0.2Arms

C2: Output capacitor
Rated voltage : More than 10V
Capacitance : 220 to 680µF, low impedance type
Rated ripple current : More than 0.2Arms
Evaluate under actual operating conditions since it affects the output ripple voltage.

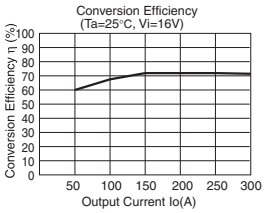
●Dimensions (Unit : mm)



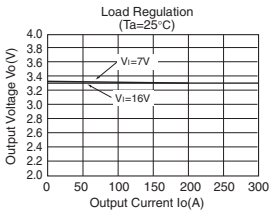
●Derating Curve



●Conversion Efficiency



●Load Regulation



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