

5V/150mA Output

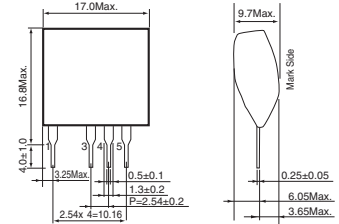
Step-down DC/DC Converter (Non-isolated)

BP5225

● Absolute Maximum Ratings

Parameter	Symbol	Limits	Unit
Input voltage	V_i	30	V
Operating temperature range	T_{opr}	-20 to +80	°C
Storage temperature range	T_{stg}	-25 to +85	°C
Maximum surface temperature	T_{smax}	100	°C
Maximum output current	I_{opeak}	150	mA

● Dimensions (Unit : mm)

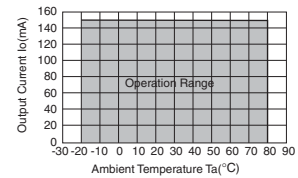


● Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage range	V_i	10.0	12.0	26.4	V	DC
Output voltage	V_o	4.8	5.0	5.2	V	$V_i=12V, I_o=150mA$
Output current	I_o	-	-	150	mA	$V_i=12V$ *1
Line regulation	V_L	-	0.04	0.10	V	$V_i=10.0$ to $26.4V, I_o=150mA$
Load regulation	V_R	-	0.03	0.20	V	$V_i=12V, I_o=0$ to $150mA$
Output ripple voltage	V_p	-	0.03	0.10	V _{pp}	$V_i=12V, I_o=150mA$ *2
Power conversion efficiency	η	70	78	-	%	$V_i=12V, I_o=150mA$

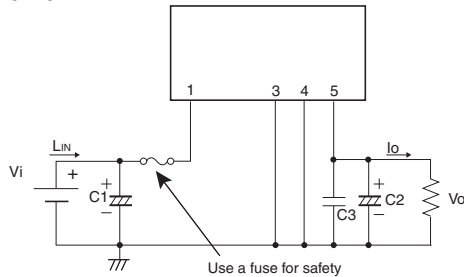
*1 Maximum output current must be reduced by ambient temperature.
*2 An output ripple voltage sometimes changes in capacitor to use, the measurement environment.

● Derating Curve



● Application Circuit

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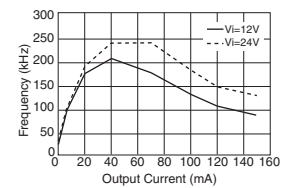
Pin No.	Function
1	Input terminal V_i
2	Not used
3	GND
4	GND
5	Output terminal V_o

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

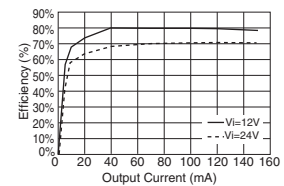
External Component Specifications

FUSE: FUSE	Use a fast-acting fuse from 0.5 to 1A.
C1: Input Capacitor	Rated Voltage : More than 50V Capacity : 68 to 470 μ F, low impedance type Rated ripple current : More than 0.42Arms
C2: Output Capacitor	Rated Voltage : More than 10V Capacity : 100 to 470 μ F, low impedance type ESR : Less than 0.22 Ω Rated ripple current : More than 0.34Arms Evaluate under actual operating conditions since it affects the output ripple voltage.
C3: Noise Removal Capacitor	Rated Voltage : More than 10V Film or ceramic capacitor. Capacity : 0.1 to 0.22 μ F.

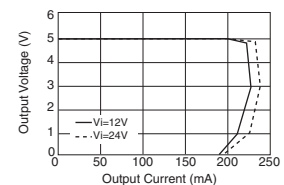
● Oscillation Frequency



● Conversion Efficiency



● Load Regulation



● Temperature Characteristics

