



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



0 to 19V/300mA Output

Broad output DC/DC Converter(Non-isolated)

BP5811

Absolute Maximum Ratings

Parameter	Symbol	Limits	Unit
Motor driving supply voltage	V_{Min}	25	V
CTL input voltage	V_{CTL}	0.3 to 5.5	V
Maximum output current	I_{Opeak}	300	mA
Operating temperature range	T_{opr}	-20 to +80	°C
Storage temperature range	T_{stg}	-30 to +85	°C
Maximum surface temperature	T_{cmax}	100	°C

Recommended Action Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Motor driving supply voltage	V_{MIN}	19.0	20.0	21.0	V	$I_O=300mA$
CTL input voltage	V_{ctl}	0	-	5.0	V	
CTL input frequency	f_{ctl}	1	50	100	kHz	

Electrical Characteristics

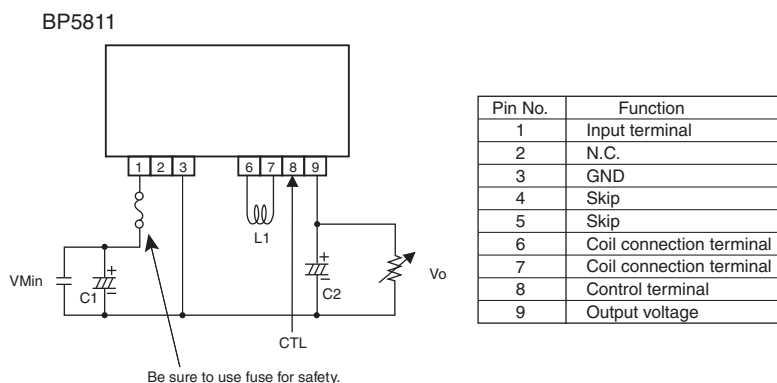
(Unless otherwise specified, $V_{MIN}=20V$, $I_O=300mA$, $V_{CTL}=5.0V$, $T_a=25^\circ C$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Output voltage	V_O	18.0	19.0	20.0	V	
		14.3	15.1	15.9	V	$V_{ctl}=4.0V$ $I_O=240mA$
		6.76	7.35	7.94	V	$V_{ctl}=2.0V$ $I_O=120mA$
Output current	I_O	-	-	300	mA	*1
Output ripple	V_P	-	0.05	0.15	V _{p-p}	*2
Power conversion efficiency	η	88	93	-	%	

*1 Maximum output current is charged due to the output voltage or the ambient temperature.

*2 An output ripple voltage is charged due to smooth capacitor, measurement environment, pattern layout.

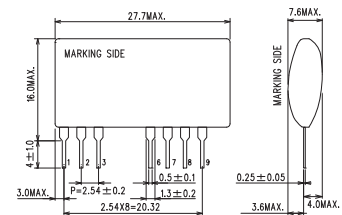
Application Circuit



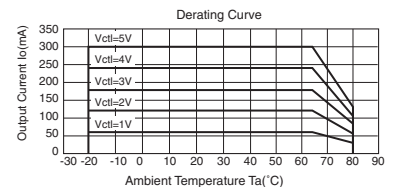
External Component Specifications

FUSE: Fuse	Use a quick-acting fuse (2.3A)
C1: Input smoothing capacitor	470 μ F/50V Low impedance Recommended part : PM series (Nichicon)
C2: Output smoothing capacitor	470 μ F/50V Low impedance Recommended part : PM series (Nichicon)
L1: Power inductor	47 μ H, Rated current 1.2A or higher Recommended part : TSL0808-470K1R2 (TDK)

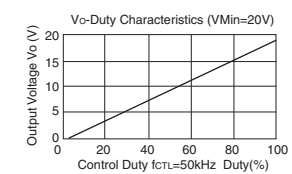
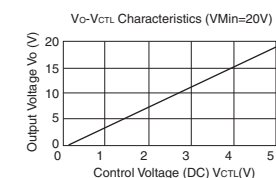
Dimensions (Unit : mm)



Derating Curve



Output Voltage Control Characteristics (Ta=25°C)



Conversion Efficiency (V_Min=20V, V_CTL=5V)

