Low Voltage Variable Output LDO Regulator

BA00BC0WFP/WT

●Description

BA00BC0WFP/WT is a PNP output LDO regulator IC with the output current of 1A and a voltage accuracy of ±2%.
Output voltage can be set (1.5V to 12V) by external resistor. Over-current protection circuit and thermal protection circuit are incorporated to prevent IC from being damaged by short and thermal break down.

●Features

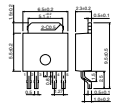
1) Maximum output current : 1A
2) Output voltage setting by external resistor
3) Low drop-out voltage(1.5V to 12V) type with PNP output
4) Built-in over-current protection circuit to prevent IC from being damaged by short
5) Built-in thermal protection circuit for protecting thermal break down
6) Built-in ON/OFF switch to realize the shutdown current 0uA
7) TO252-5, TO220FP-5 package
8) C pin output voltage accuracy : ±2%

●Applications

Printer, TV, DVD and Storage etc.

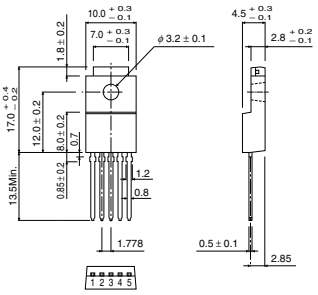
●Dimension (Units : mm)

BA00BC0WFP



TO252-5

BA00BC0WT



TO220FP-5

●Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits		Unit
Supply voltage	Vcc	18 *1		V
Power dissipation	Pd	1300 *2 (TO252-5)	2000 *3 (TO220FP-5)	mW
Operating temperature range	Topr	−40 ~ +105		˚C
Storage temperature range	Tstg	−55 ~ +150		˚C
Junction temperature	Tjmax	150		˚C

*1 Do not however exceed Pd.
*2 Mounted on 70mm x 70mm x 1.6mm glass-epoxy PCB Derating in done at 10.4mW/˚C for operating above Ta=25˚C
*3 Derating in done at 16mW/˚C for operating above Ta=25˚C

●Recommended Operating Conditions (Ta=25˚C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Input voltage	Vcc	3.0	–	16.0	V
Output current *4	Io	–	–	1	A
Output voltage	VOUT	1.5	–	12.0	V

*4 Do not however, Vcc≧3.3V

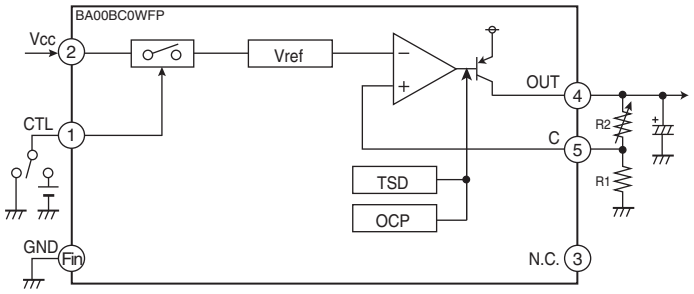
●Electrical Characteristics (Unless otherwise specified, Ta=25˚C, Vcc=3.3V, Io=200mA, R1=30kΩ, R2=30kΩ)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Shut down current	ISD	–	0	10	μA	Vctl=0V
Vc pin voltage	Vc	1.225	1.250	1.275	V	Io=50mA
Output voltage	Vo	–	2.50	–	V	Io=200mA
Dropout voltage	ΔVd	–	0.3	0.5	V	Vcc=3.0V
Peak output current	Io	1.0	–	–	A	
Ripple rejection	R.R.	44	55	–	dB	f=120Hz, ein=−20dBV, Io=100mA
Line regulation	Reg.I	–	15	30	mV	Vcc=4.5V → 16V
Load regulation	Reg.L	–	35	75	mV	Io=0mA → 1A
Temperature coefficient of output voltage *	Tcvo	–	±0.015	–	% / °C	Io=5mA, Tj=0~125°C
Bias current	Ib	–	0.5	0.9	mA	Io=0mA
Short circuit output current	Ios	–	0.4	–	A	Vcc=16V
Stand-by ON level	Vth1	2.0	–	16	V	ACTIVE MODE, Io=0mA
Stand-by OFF level	Vth2	–	–	0.8	V	OFF MODE, Io=0mA
Input high current	Iin	40	80	130	μA	Vctl=3V, Io=0mA

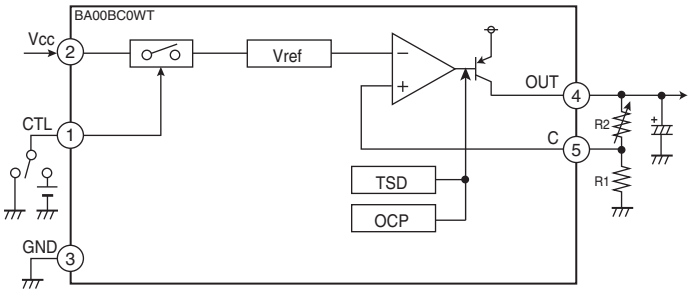
- This product is not designed for protection against radioactive rays.
* Designed Guarantee.(Outgoing inspection is not done all products.)
Measurement is done at Ta≒Tj, and variations in the parameter of all measurement(expect Temperature Coefficient of Output Voltage)caused by temperature change are not considered.

●Application Circuit

[BA00BC0WFP]



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