

Low Voltage/1A Output LDO Regulator

BA□□BC0WFP/WT BA□□BC0FP/T

Description

BA□□BC0WFP/WT and BA□□BC0FP/T are PNP output LDO regulator ICs with the output current of 1A and voltage accuracy of $\pm 2\%$. Over-current protection circuit and thermal protection circuit are incorporated. BA□□BC0WFP/WT incorporates shutdown switch to control output ON/OFF.

[Series line-up]

Part No.	Output Current (A)	Output Voltage(V)										Package	
BA□□BC0WFP	1.0	1.5	1.8	2.5	3	3.3	5	6	7	8	9	10	TO252-5
BA□□BC0WT		1.5	1.8	2.5	3	3.3	5	6	7	8	9	10	TO220FP-5
BA□□BC0FP		1.5	1.8	2.5	3	3.3	5	6	7	8	9	10	TO252-3
BA□□BC0T		1.5	1.8	2.5	3	3.3	5	6	7	8	9	10	TO220FP

Features

- 1) Maximum output current : 1A
- 2) Output voltage accuracy : $\pm 2\%$
- 3) Low drop-out voltage type with PNP output
- 4) Built-in over-current protection circuit and thermal protection circuit
- 5) Built-in shutdown circuit which circuit current is 0uA. (BA□□BC0WFP/WT)
- 6) Two types of package (Small mounting type and insertion type)

Applications

Consumer products

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply Voltage	V _{CC}	18	V
Power Dissipation	P _d	1200	mW
		1300	
		2000	
		2000	
Operating Temperature Range	T _{opr}	-40 ~ +105	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C
Junction Temperature	T _{jmax}	150	°C

*1 Do not however exceed P_d.

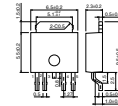
*2 Mounted on 70mm x 70mm x 1.6mm glass-epoxy PCB Derating in done at 9.6mW/°C for operating above Ta=25°C

*3 Mounted on 70mm x 70mm x 1.6mm glass-epoxy PCB Derating in done at 10.4mW/°C for operating above Ta=25°C

*4 Derating in done at 16mW/°C for operating above Ta=25°C

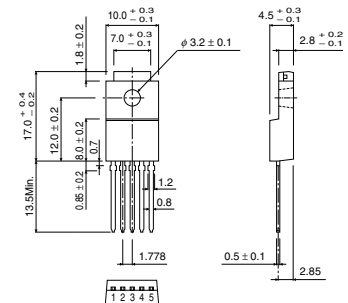
Dimension (Units :mm)

[BA□□BC0WFP]



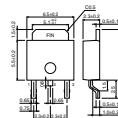
TO252-5

[BA□□BC0WT]



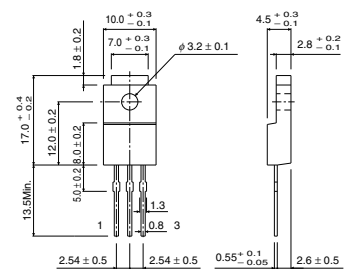
TO220FP-5

[BA□□BC0FP]



TO252-3

[BA□□BC0T]



TO220FP

[BA□□BC0WFP/WT]

● Electrical Characteristics (Unless otherwise specified, Ta=25°C, Vcc=3.3V, VCTL=3V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Shut down circuit current	I _{sd}	–	0	10	μA	V _{CTL} =0V, OFF MODE
Output voltage	V _o	0.98 x V _o	V _o	1.02 x V _o	V	V _o : Refer to the series line-up
Peak output current	I _o	1.0	–	–	A	
Ripple rejection	R.R.	44	55	–	dB	f=120Hz, e _{in} =–20dBV, I _o =100mA
Line regulation	Reg.I	–	15	35	mV	I _o =200mA
Load regulation	Reg.L	–	33	75	mV	I _o =0mA → 1A
Temperature coefficient of output current *	T _{cvo}	–	±0.02	–	% / °C	I _o =5mA, T _j =0~125°C
ON mode voltage	V _{th1}	2.0	–	–	V	I _o =0mA
OFF mode voltage	V _{th2}	–	–	0.8	V	OFF MODE, I _o =0mA
Input high current	I _{in}	40	80	130	μA	I _o =0mA

* Designed Guarantee.(Outgoing inspection is not done all products.)

[BA□□BC0FP/T]

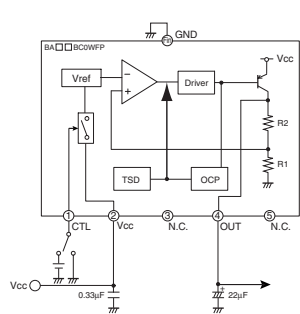
● Electrical Characteristics (Unless otherwise specified, Ta=25°C, Vcc=3.3V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Output voltage	V _o	0.98 x V _o	V _o	1.02 x V _o	V	V _o : Refer to the series line-up
Peak output current	I _o	1.0	–	–	A	
Ripple rejection	R.R.	44	55	–	dB	f=120Hz, e _{in} =–20dBV, I _o =100mA
Line regulation	Reg.I	–	15	35	mV	I _o =200mA
Load regulation	Reg.L	–	33	75	mV	I _o =0mA → 1A
Temperature coefficient of output current *	T _{cvo}	–	±0.02	–	% / °C	I _o =5mA, T _j =0~125°C

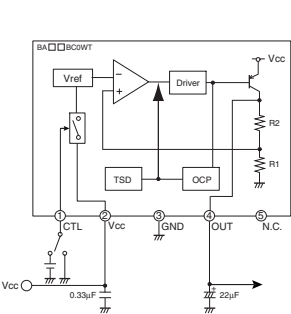
* Designed Guarantee.(Outgoing inspection is not done all products.)

● Application Circuit

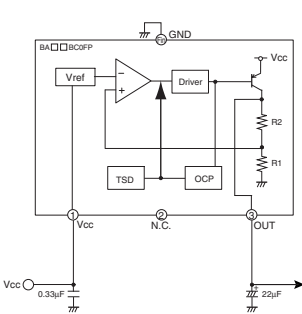
[BA□□BC0WFP]



[BA□□BC0WT]



[BA□□BC0FP]



[BA□□BC0T]

