

35V MAX Variable Output LDO Regulator BA00CC0WFP/WT(-V5)

● Description

BA00CC0WFP/WT(-V5) is a variable output LDO regulator IC with the output current of 1A and C pin voltage accuracy of $\pm 2\%$. Output voltage can be set (3V to 15V) by external resistor. Over-current protection circuit, over-voltage protection circuit and thermal protection circuit are incorporated in this IC. BA00CC0WFP/WT(-V5) incorporates shutdown switch to control output ON/OFF. This IC is perfect for applications with high-voltage requirements and power supply applications.

● Features

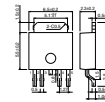
- 1) Maximum output current : 1A
- 2) Output voltage setting (3V to 15V) by external resistor
- 3) Low drop-out voltage type with PNP output
- 4) 35V high-voltage process
- 5) Built-in over-voltage protection circuit, over-current protection circuit, thermal protection circuit
- 6) Built-in shutdown circuit which circuit current is 0uA.
- 7) Two types of package
(Small mounting type and insertion type)
- 8) C pin output voltage accuracy : $\pm 2\%$

● Applications

Consumer products

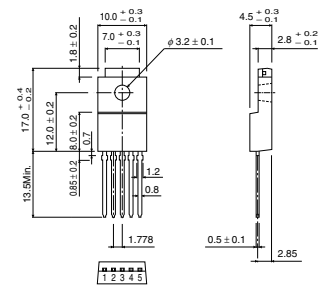
● Dimension (Unit : mm)

BA00CC0WFP



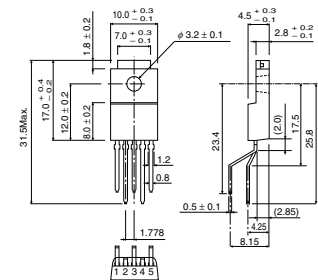
TO252-5

BA00CC0WT



TO220FP-5

BA00CC0WT(-V5)



TO220FP-5(-V5)

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	-0.3 ~ +35 ^{*1}	V
V _c Pin voltage	V _{CTL}	-0.3 ~ V _{CC}	V
Power dissipation	Pd	1300 ^{*2}	mW
		2000 ^{*3}	
Operating temperature range	T _{opr}	-40 ~ +125	°C
Storage temperature range	T _{stg}	-55 ~ +150	°C
Junction temperature	T _{jmax}	150	°C
Peak supply voltage	V _{CCPeak}	50 ^{*4}	V

*1 Do not however exceed Pd.

*2 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

*4 Bias voltage in 200msec(tr≥1msec).

Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Input voltage	V _{CC}	4.0	-	25.0	V
Output current	I _o	-	-	1.0	A
Output voltage	V _{OUT}	3.0	-	15	V

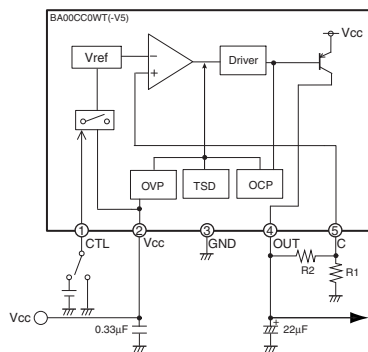
Electrical Characteristics (Unless otherwise specified, Ta=25°C, V_{CC}=10V, I_o=500mA, R₁=2.2kΩ, R₂=6.8kΩ)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Shut down current	I _{sd}	-	0	10	μA	V _{CTL} =0V
Bias current	I _b	-	2.5	5.0	mA	V _{CTL} =2V, I _o =0mA
C pin voltage	V _c	1.200	1.225	1.250	V	I _o =50mA
Output voltage	V _o	-	5.00	-	V	
Dropout voltage	ΔV _d	-	0.3	0.5	V	V _{CC} =0.95V _o
Peak output current	I _o	1.0	-	-	A	
Ripple rejection	R.R.	45	55	-	dB	f=120Hz, e _{in} =1V _{rms} , I _o =100mA
Line regulation	Reg.I	-	20	100	mV	V _{CC} =6 → 25V
Load regulation	Reg.L	-	50	150	mV	I _o =5mA → 1A
Temperature coefficient of output voltage [*]	T _{cvo}	-	±0.02	-	% / °C	I _o =5mA, T _j =0~125°C
Short circuit output current	I _{os}	-	0.40	-	A	V _{CC} =25V
ON mode level	V _{thH}	2.0	-	-	V	ACTIVE MODE, I _o =0mA
OFF mode level	V _{thL}	-	-	0.8	V	OFF MODE, I _o =0mA
Input high current	I _{CTL}	100	200	300	μA	V _{CTL} =5V, I _o =0mA

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

Application Circuit

[BA00CC0WT(-V5)]



[BA00CC0WFP]

