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 ±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

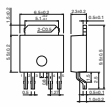
1) Maximum output current : 1A
2) Output voltage setting (3V to 15V) by external resistor
3) Low drop-out voltage type with PNP output
4) 35V high-voltage process
5) Built-in over-voltage protection circuit, over-current protection circuit, thermal protection circuit
6) Built-in shutdown circuit which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

●Applications

Consumer products

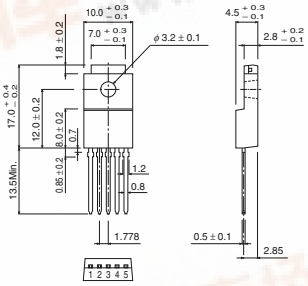
●Dimension (Unit : mm)

BA00CC0WFP



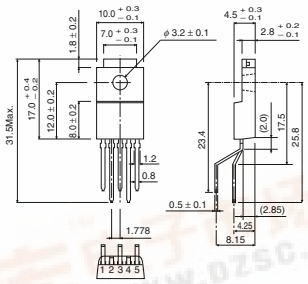
TO252-5

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
Vc Pin voltage		V_{CTL}	−0.3 ~ Vcc	V
Power dissipation	TO252-5	Pd	1300 *2	mW
	TO220FP-5(V5)		2000 *3	
Operating temperature range		Topr	−40 ~ +125	˚C
Storage temperature range		Tstg	−55 ~ +150	˚C
Junction temperature		Tjmax	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	Io	–	–	1.0	A
Output voltage	V_{OUT}	3.0	–	15	V

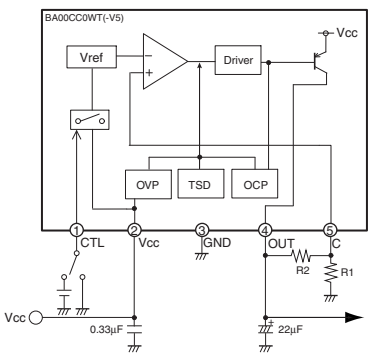
● Electrical Characteristics (Unless otherwise specified, Ta=25˚C, Vcc=10V, Io=500mA, R_1=2.2kΩ, R_2=6.8kΩ)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Shut down current	Isd	–	0	10	μA	V_{CTL}=0V
Bias current	Ib	–	2.5	5.0	mA	V_{CTL}=2V, Io=0mA
C pin voltage	Vc	1.200	1.225	1.250	V	Io=50mA
Output voltage	Vo	–	5.00	–	V	
Dropout voltage	ΔVd	–	0.3	0.5	V	Vcc=0.95Vo
Peak output current	Io	1.0	–	–	A	
Ripple rejection	R.R.	45	55	–	dB	f=120Hz, ein=1Vrms, Io=100mA
Line regulation	Reg.I	–	20	100	mV	Vcc=6 → 25V
Load regulation	Reg.L	–	50	150	mV	Io=5mA → 1A
Temperature coefficient of output voltage *	Tcvo	–	±0.02	–	% / °C	Io=5mA, Tj=0~125°C
Short circuit output current	I_{OS}	–	0.40	–	A	Vcc=25V
ON mode level	VthH	2.0	–	–	V	ACTIVE MODE, Io=0mA
OFF mode level	VthL	–	–	0.8	V	OFF MODE, Io=0mA
Input high current	I_{CTL}	100	200	300	μA	V_{CTL}=5V, Io=0mA

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

● Application Circuit

[BA00CC0WT(-V5)]



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