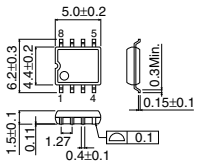
LDO Regulator With Shutdown Circuit

BA00BC0WF

●Description

BA00BC0WF is a PNP output LDO regulator IC with the output current of 0.5A 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.

●Dimension (Unit : mm)



SOP8

●Features

1) Maximum output current : 0.5A
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
6) Built-in ON/OFF switch to realize the shutdown current 0uA
7) SOP8 package
8) C pin output voltage accuracy : ±2%

●Applications

Printer, TV, DVD and Storage etc.

● Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Supply voltage	Vcc	18 *1	V
Power dissipation	Pd	620 *2	mW
Operating temperature range	Topr	−40 ~ +85	˚C
Storage temperature range	Tstg	−55 ~ +125	˚C
Junction temperature	Tjmax	125	˚C

∗1 Do not however exceed Pd.
∗2 Mounted on 70mm x 70mm x 1.6mm glass-epoxy PCB Derating in done at 6.2mW/˚C for operating above Ta=25˚C

● Recommended Operating Conditions (Ta=25˚C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Input voltage	V_{CC}	3.0	–	16.0	V
Output current	Io	–	–	0.5	A
Output voltage	V_{OUT}	1.5	–	12.0	V

● Electrical Characteristics (Unless otherwise specified, Ta=25˚C, Vcc=3.3V, Io=150mA, R_1=30kΩ, R_2=30kΩ)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Shut down current	I_{SD}	–	0	10	μA	Vctl=0V
Vc pin voltage	Vc	1.225	1.250	1.275	V	Io=10mA
Output voltage	Vo	–	2.50	–	V	Io=150mA
Dropout voltage	ΔVd	–	0.18	0.30	V	Vcc=2.5V
Peak output current	Io	0.5	–	–	A	
Ripple rejection	R.R.	44	55	–	dB	f=120Hz, ein=−20dBV, Io=100mA
Line regulation	Reg.I	–	20	50	mV	Vcc=4.5V → 16V
Load regulation	Reg.L	–	50	150	mV	Io=0mA → 500mA
Temperature coefficient of output voltage *1	Tcvo	–	±0.02	–	% / °C	Io=5mA, Tj=0~125°C
Bias current	Ib	–	0.6	–	mA	Io=0mA
Short circuit output current	Ios	–	0.4	–	A	Vcc=16V
Stand-by ON level	Vth1	2.0	–	–	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.
∗1 Designed Guarantee.(Outgoing inspection is not done all products.)
∗ All characteristics are measured with a capacity across the input of 0.33μF and a capacity across the output of 0.22μF.
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

