

AB-EZPC-96

High Power Current Regulator with Bias Voltage Rectification

Features

- DFN3030 package (MSOP available)
- Built-in rectification circuit
- Accurate constant current
- Over Current Protection (OCP)
- Over temperature protection (OTP)

Description

AB-EZPC series is a constant current regulator with built-in bias voltage rectification circuit. It is designed to maintain constant current and hence constant luminance for DC powered LED lighting applications. AB-EZPC series rectifies power input for the LED string to operate regardless of the polarity of the bias voltage. Additionally, to ensure system reliability, AB-EZPC series is built with thermal protection function (OTP). The AB-EZPC series is available in 3030 DFN & MSOP 8 PIN packages.



Pin Description_3030 DFN

e

b



Pin No.	Name	Function
5	VA	Power input pin A
4	VB	Power input pin B
8	P+	Output pin to connect external LED positive.
1	N-	Output pin to connect external LED negative



Absolute Maximum Ratings

Parameter	Value
Supply Voltage VA-VB	38V
Output current	400mA
Junction Temperature	150 °C
Operating Ambient Temperature TA	-20 ℃ ~ 85℃
Storage Temperature Range	- 40° C ~150 °C
Package Thermal Resistance (junction to ambient)	50°C/W
Lead Temperature (All Pb free packages, soldering, 10 sec)	260 °C
ESD voltage protection, human body model	4KV

Recommended Operating Conditions

Symbol	Parameter	Min/Max	Unit
VA-VB	Supply Voltage	1.8 to 38	V
ТА	Operating Ambient Temperature	-20 to 85	°C

Electrical Characteristics (TA = $+25^{\circ}$ C, unless otherwise specified.)

Characteristic	Symbol	Condition	Min.	Тур.	Max.	Unit
Output Current	ls	VA-VB >1.8		400		mA
Output Ramp Down Temperature	T1	Start point (100% current)		120		°C
Shutdown Temperature	T2	IP=0mA (0% current)		160		°C

Function Block



Appendix I_ DFN3030 8 PIN





	PACKAGE TYPE																	
JEDEC OUTLINE	N	0-229		N	0-229	()	M	0-248	S									
PKG CODE	WD	FN(X30	8)	VDF	N(Y30	8)	UDF	TN(W30)8)									
SYMBOLS	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.									
А	0.70	0.75	0.80	0.80	0.85	0.90	0.50	0.55	0.60									
A1	0.00	0.02	0.05	0.00	0.02	0.05	0.00	0.02	0.05									
A3	0.203 REF. 0.203 REF.		0.150 REF.															
D	3.	3.00 BSC 3.00 BSC		3.00 BSC														
E	3.	00 BS	3	3.00 BSC		3.00 BSC												
e	0.65 BSC		2	0.	65 BS	C	0.65 BSC											
к	0.20	-	-	0.20	-		0.20	-	-									
D40 0170	D2		E2		L													
PAD SIZE		D2			E2		0	L			b		LEAD	FINISH	10000	. mm		
	MIN.	NOM.	MAX.	MIN.	E2 NOM.	MAX.	MIN.	L NOM.	MAX.	MIN.	b NOM.	MAX.	LEAD Pure Tin	FINISH PPF	JEDEC CODE	VDFN	WDFN	UDF
75*X87* MI	MIN.	NOM. 2.00	MAX.	NIN.	E2 NOM. 1.65	MAX.	MIN. 0.35	L NOM. 0.40	MAX.	MIN. 0.25	ь NOM. 0.30	MAX. 0.35	LEAD Pure Tin V	FINISH PPF V	JEDEC CODE W3030C-2	VDFN V	WDFN	UDFN
75*X87* M	MIN. L 1.95 L 1.95	NOM. 2.00 2.00	MAX. 2.05 2.05	NIN. 1,60	E2 NOM. 1.65 1.70	MAX. 1.70 1.75	MIN. 0.35 0.25	L NOM. 0.40 0.35	MAX. 0.45 0.45	MIN. 0.25 0.25	b NOM. 0.30 0.30	MAX. 0.35 0.35	LEAD Pure Tin V	FINISH PPF V X	JEDEC CODE W3030C-2 W3030C-2	VDFN V	WDFN V	
75*X87* MI 79*X91* MI 63*X94* MI	MIN, L 1.95 L 1.95 L 2.25	NOM. 2.00 2.30	MAX. 2.05 2.05 2.35	NIN. 1,60 1,65 1,45	E2 NOM. 1.65 1.70 1.50	MAX. 1.70 1.75 1.55	MIN. 0.35 0.25 0.425	L NOM. 0.40 0.35 0.475	MAX. 0.45 0.45 0.525	MIN. 0.25 0.25 0.20	b NON. 0.30 0.30 0.25	MAX. 0.35 0.35 0.30	LEAD Pure Tin V V	FINISH PPF V X X	JEDEC CODE W3030C-2 W3030C-2 N/A	VDFN V V	WDFN V V	
75*X87* M 79*X91* M 63*X94* M 75*X10* M	MIN. L 1.95 L 1.95 L 2.25 L 2.55	NOM. 2.00 2.00 2.30 2.60	MAX. 2.05 2.05 2.35 2.65	NIN. 1,60 1,65 1,45 1,75	E2 NOM. 1.65 1.70 1.50 1.80	MAX. 1.70 1.75 1.55 1.85	MIN. 0.35 0.25 0.425 0.20	L NOM. 0.40 0.35 0.475 0.30	MAX. 0.45 0.45 0.525 0.40	MIN. 0.25 0.25 0.20 0.25	b NON. 0.30 0.30 0.25 0.30	MAX. 0.35 0.35 0.30 0.35	LEAD Pure Tin V V V	FINISH PPF V X X	JEDEC CODE W3030C-2 W3030C-2 N/A N/A	VDFN V V V	WDFN V V V	
75*X87* MI 79*X91* MI 63*X94* MI 75*X10* MI 71*X10* MI	MIN, L 1.95 L 1.95 L 2.25 L 2.55 L 2.25	NOM. 2.00 2.00 2.30 2.60 2.30	MAX. 2.05 2.05 2.35 2.65 2.35	NIN. 1.60 1.65 1.45 1.75 1.45	E2 NOM. 1.65 1.70 1.50 1.80 1.50	MAX. 1.70 1.75 1.55 1.85 1.55	MIN. 0.35 0.25 0.425 0.20 0.20	L NOM. 0.40 0.35 0.475 0.30 0.30	MAX. 0.45 0.45 0.525 0.40 0.35	MIN. 0.25 0.25 0.20 0.25 0.25	b NOM. 0.30 0.30 0.25 0.30 0.30	MAX. 0.35 0.35 0.30 0.35 0.35	LEAD Pure Tin V V V V V	FINISH PPF V X X X X	JEDEC CODE W3030C-2 W3030C-2 N/A N/A N/A	VDFN V V V V	WDFN V V V V	

Appendix II

Please follow the guidelines below for PCB layout design

DFN3030 8 PIN



Metal layer









USER DIRECTION OF FEED





包裝方式: 5000 EA/PER REEL 1 REEL/BOX