

0.4A PWM BUCK DC/DC CONVERTER

GENERAL DESCRIPTION

The product is a step-down switch-mode converter. It can offer a very compact solution to achieve a 0.4A continuous output current over a wide input supply range, with excellent load and line regulation. .

FEATURES

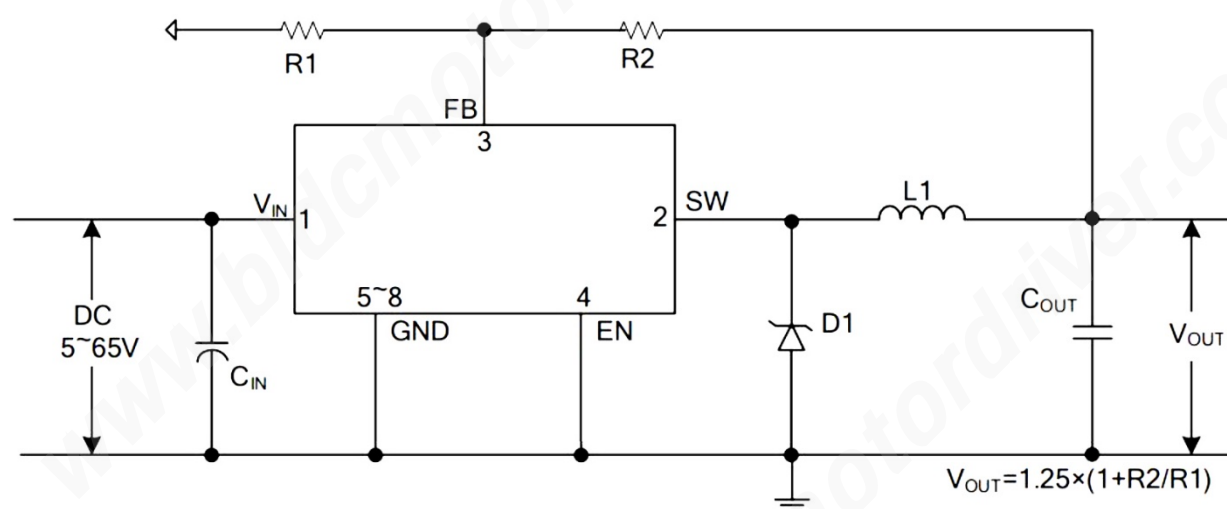
- Output load current: 0.4A
- Wide operation voltage: 5V~65V
- High efficiency up to 85%
- Internal current and thermal limit

APPLICATIONS

- Flat-Panel Television and Monitor
- General Purposes

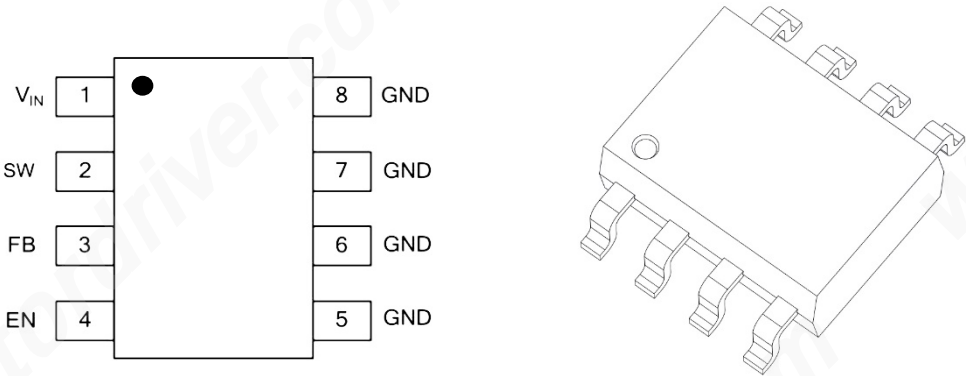
TYPICAL APPLICATION

CIRCUIT



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Package



SOP-8

Pin Name	Pin Number	I/O	Pin Function
VIN	1	P	Supply voltage input
SW	2	O	Switching output
FB	3	I	Output voltage feedback control
EN	4	I	ON/OFF Shutdown
GND	5,6,7,8	P	Ground

ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{IN}	-0.3~70	V
ON/OFF PIN Input Voltage	V _{EN}	-0.3~VIN	V
Feedback Pin Voltage	V _{FB}	-0.3~VIN	V
Output Switch Pin Voltage	V _{SW}	-0.3~VIN	V
Power Dissipation	P _D	Internally Limited	W
Junction to Ambient	θ _{JA}	60	°C/W
Operating Temperature	T _{OPR}	-40~125	°C
Storage Temperature	T _{STG}	-55~150	°C

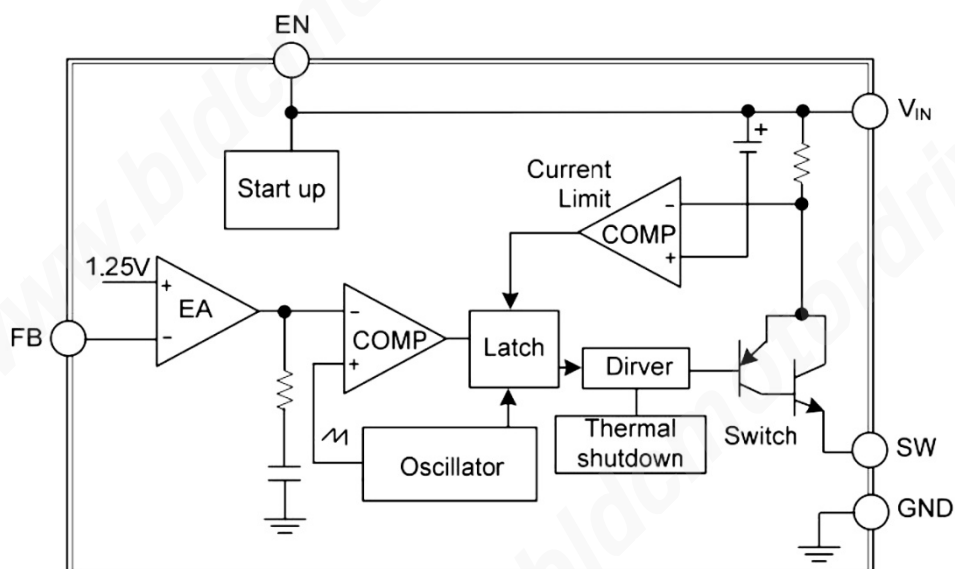
Note: If the parameters exceed the range of "absolute maximum value", it may cause permanent damage to the chip. The above is only the limit range. Under such limit conditions, the technical indicators of the chip will not be guaranteed. Working near the "absolute maximum" for a long time will affect the reliability of the chip

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ELECTRICAL CHARACTERISTICS (TA=25°C, VIN=48V, Iout=0.2A, if not noted)

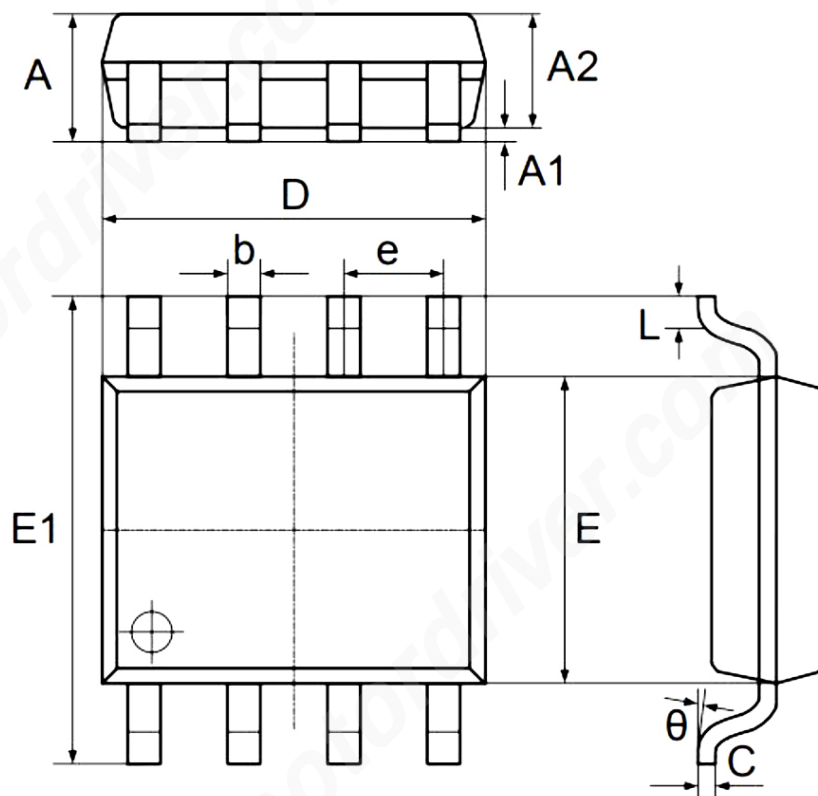
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{IN}	Input Operation Voltage		5		65	V
I _Q	Quiescent Current	V _{ON/OFF} =0V, V _{FB} =V _{IN}		2	5	mA
I _{SD}	Shutdown Supply Current	V _{ON/OFF} =2V		85	200	uA
F _{OSC}	Oscillator Frequency		120	150	180	KHz
D.C	Duty Cycle	V _{FB} =0V	0		100	%
I _{CL}	Current Limit	Peak current, No outside circuit		0.4		A
V _{IL}	EN pin Logic Input Threshold Voltage	Low, regulator ON		0.8		V
V _{IH}	High, regulator OFF			1.6		V
V _{FB}	Output Feedback Voltage		1.225	1.25	1.275	V
η	Efficiency	I _{LOAD} =0.4A		85		%

BLOCK DIAGRAM



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PACKAGE OUTLINE



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.370	1.670	0.056	0.068
A1	0.070	0.170	0.003	0.007
A2	1.300	1.500	0.053	0.061
b	0.306	0.506	0.013	0.021
C	0.203 TYP.		0.008 TYP.	
D	4.700	5.100	0.192	0.208
E	3.820	4.020	0.156	0.164
E1	5.800	6.200	0.237	0.253
e	1.270 TYP.		0.050 TYP.	
L	0.450	0.750	0.018	0.306
θ	0°	8°	0°	8°