



## SK1288

## LINEAR INTEGRATED CIRCUIT

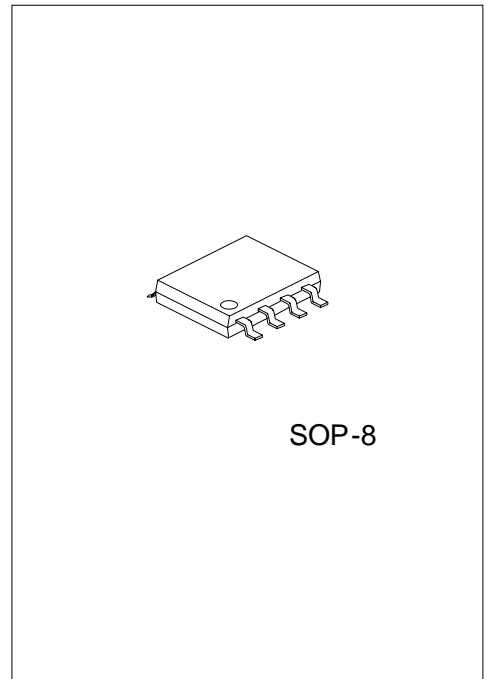
### 2-PHASE DC-FAN MOTOR DRIVER

#### DESCRIPTION

SK1288 is a 2-Phase driver for DC-Fan motor . Build-in hall amplifier with hysteresis. Low switching noise and effective motor driver are further advantages . Support the function of motor lock protection , auto-restart , rotation detection signal output .

#### FEATURES

- \* Wide supply voltage range of 2.5V to 20V
- \*Output current  $I_o(max)=600mA$
- \*Operate with Hall element
- \*Lock protection
- \*Auto-restart when the motor lock is undone
- \*FG(frequency generator) output
- \*SOP-8 package



SOP-8

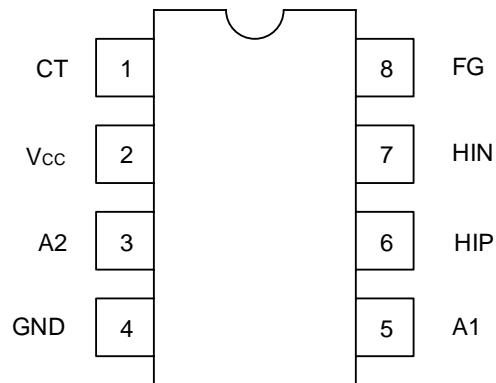
\*Pb-free plating product number: SK1288L

#### ORDERING INFORMATION

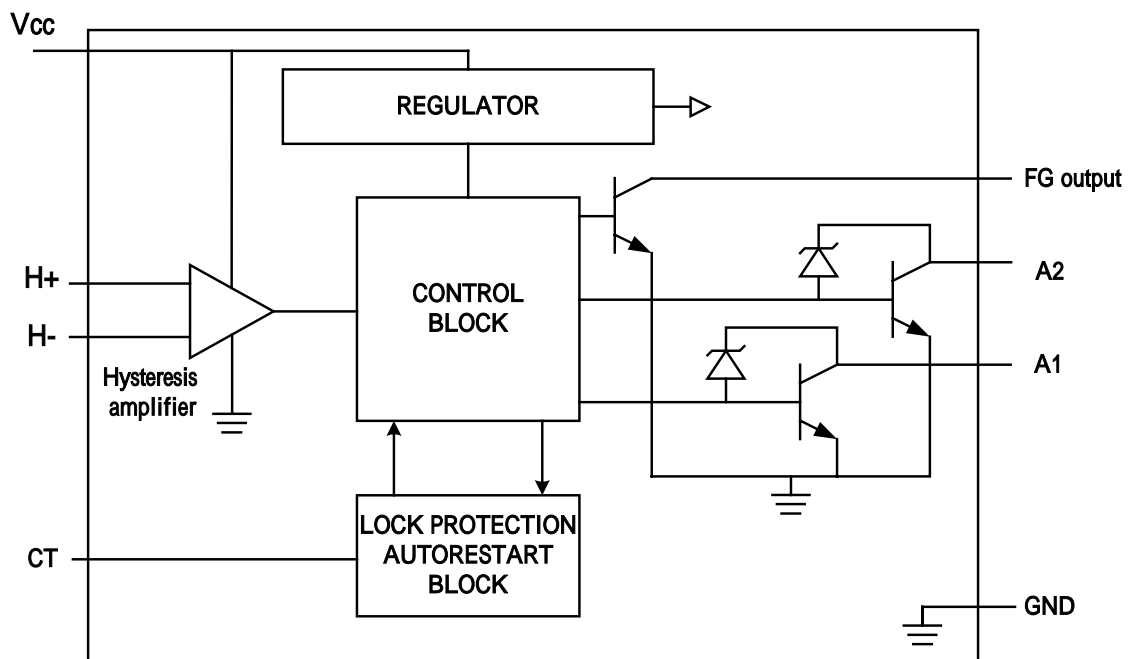
Order Number		Package	Packing
Normal	Lead Free Plating		
SK1288-S08-R	SK1288L-S08-R	SOP-8	Tape Reel
SK1288-S08-T	SK1288L-S08-T	SOP-8	Tube

<p>SK1288L-S08-R</p> <p>(1)Packing Type (2)Package Type (3)Lead Plating</p>	<p>(1) R: Tape Reel, T: Tube (2) S08: SOP-8 (3) L: Lead Free Plating Blank: Pb/Sn</p>
---	---

## ■ PIN CONFIGURATION



## ■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta = 25 )

PARAMETER	SYMBOL	RATINGS	UNIT
Supply voltage	V <sub>CC</sub>	2.5V ~ 20V	V
Supply current	I <sub>CC</sub>	20	mA
Circuit current	I <sub>o</sub>	600	mA
FG output current	I <sub>FG</sub>	20	mA
Power dissipation	P <sub>D</sub>	700	mW
Hall input common mode voltage range	V <sub>HIC</sub>	1.0 ~ V <sub>CC</sub> -0.5	V
Operating ambient temperature	T <sub>OPR</sub>	-20 ~ +85	
Storage temperature	T <sub>STG</sub>	-55 ~ +150	

Note 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

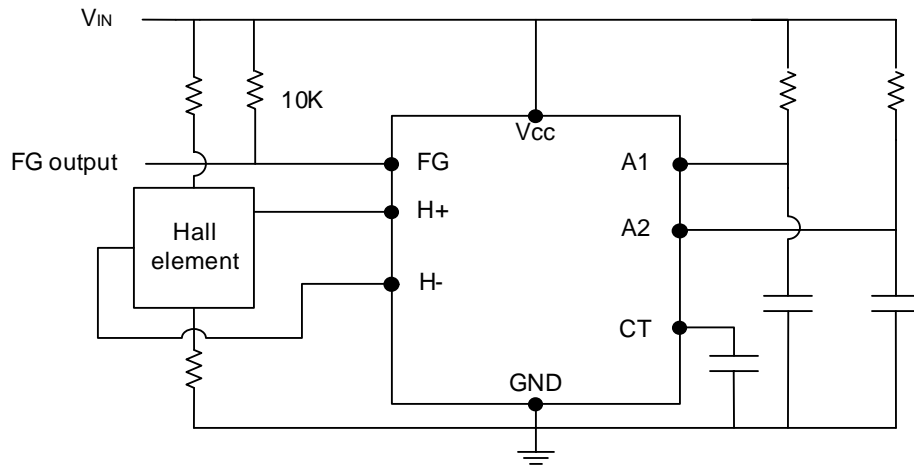
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. The device is guaranteed to meet performance specification within 0 ~ +70 operating temperature range and assured by design from -20 ~ +85 .

■ ELECTRICAL CHARACTERISTICS (Ta=25 , V<sub>CC</sub>=3V)

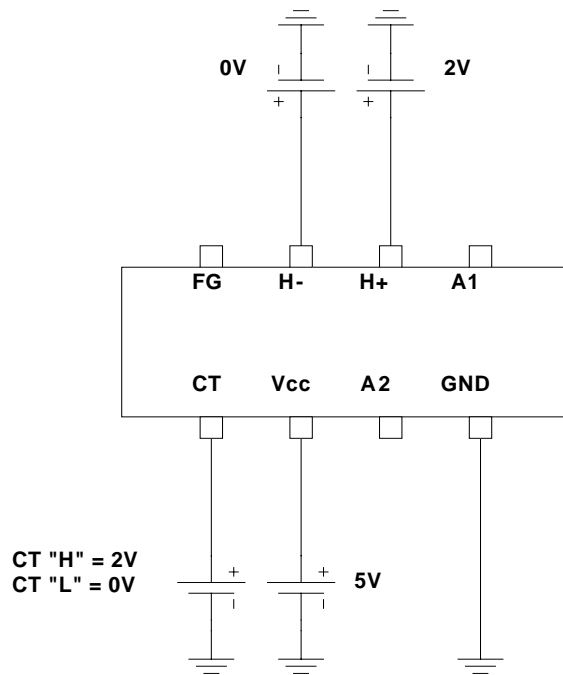
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Current drain	I <sub>CC</sub>	In drive mode (CT=L)		13		mA
		In lockup protection mode (CT=H )		3		mA
Lockup detection capacitor charge current	I <sub>CT1</sub>	V <sub>1PIN</sub> = 1.3V	0.9	1.2	1.5	uA
Capacitor discharge current	I <sub>CT2</sub>	V <sub>1PIN</sub> = 1.3V	0.5	0.6	0.8	uA
Capacitor charge/discharge current ratio	R <sub>CT</sub>			2.5		
CT charge voltage	V <sub>CT1</sub>			1.3		V
CT discharge voltage	V <sub>CT2</sub>			0.3		V
Output low level voltage	V <sub>OL</sub>	I <sub>O</sub> =200mA		0.3	0.7	V
Hall input sensitivity	V <sub>HIN</sub>	Zero peak value (including offset and hysteresis)	3		15	mV
FG output pin low voltage	V <sub>FG</sub>	I <sub>FG</sub> =5mA		0.11		V
FG output pin leakage current	I <sub>FG(LEAK)</sub>	V <sub>FG</sub> =15V		1		uA

### ■ TYPICAL APPLICATION CIRCUIT

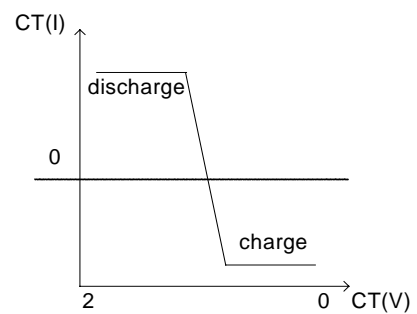
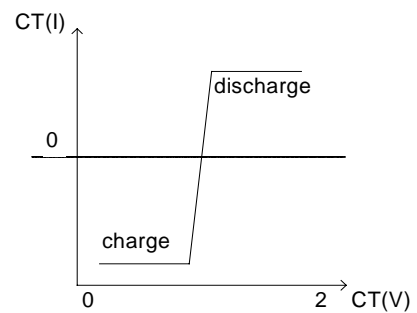
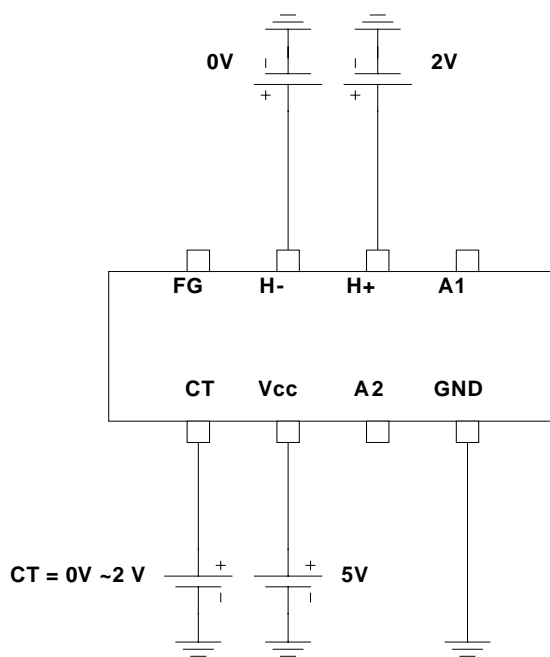


### ■ TEST CIRCUIT

#### 1. I<sub>CC</sub>

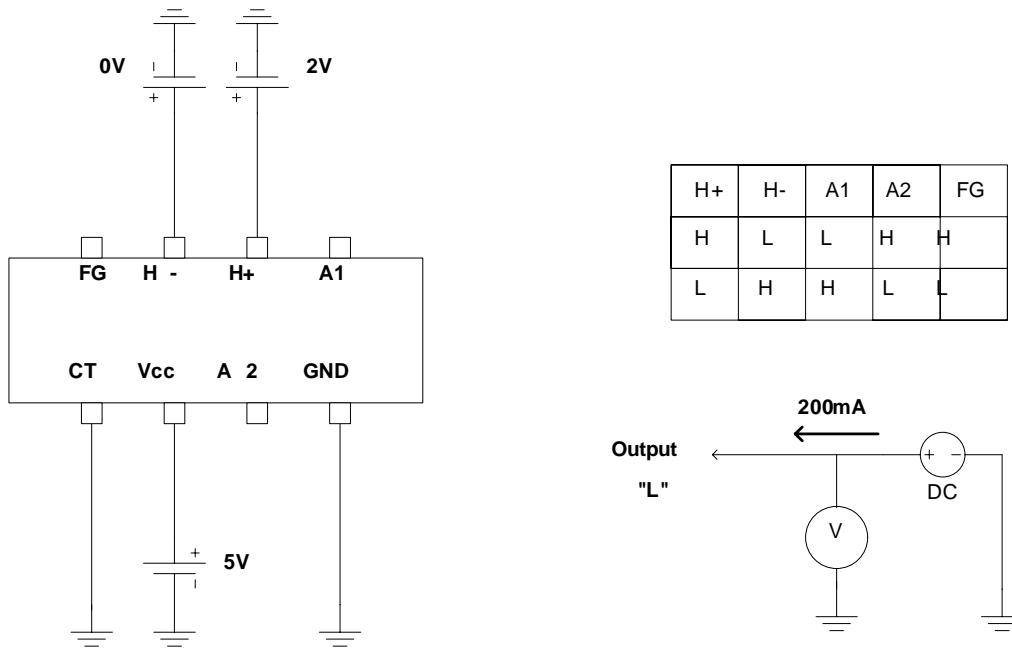


#### 2. CT charge / discharge

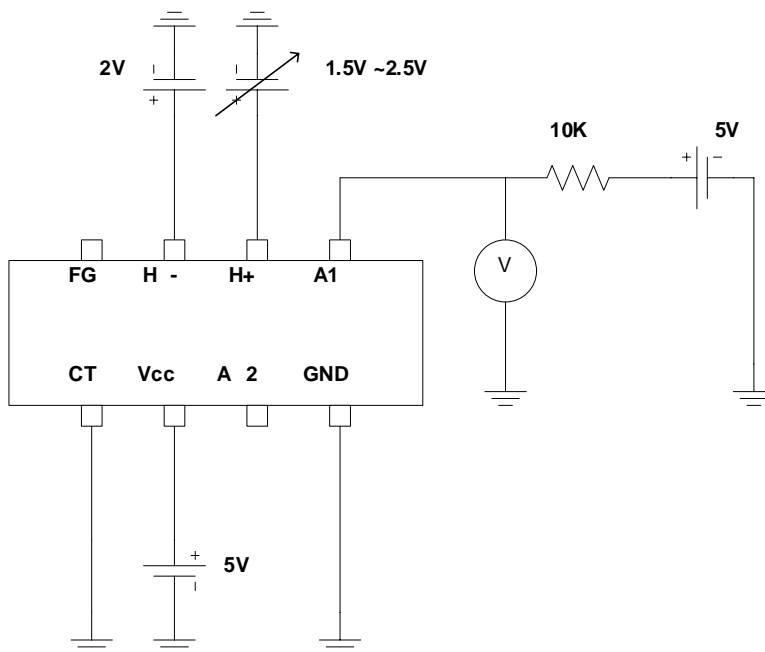


## ■ TEST CIRCUIT(Cont.)

### 3. $V_{OL}$

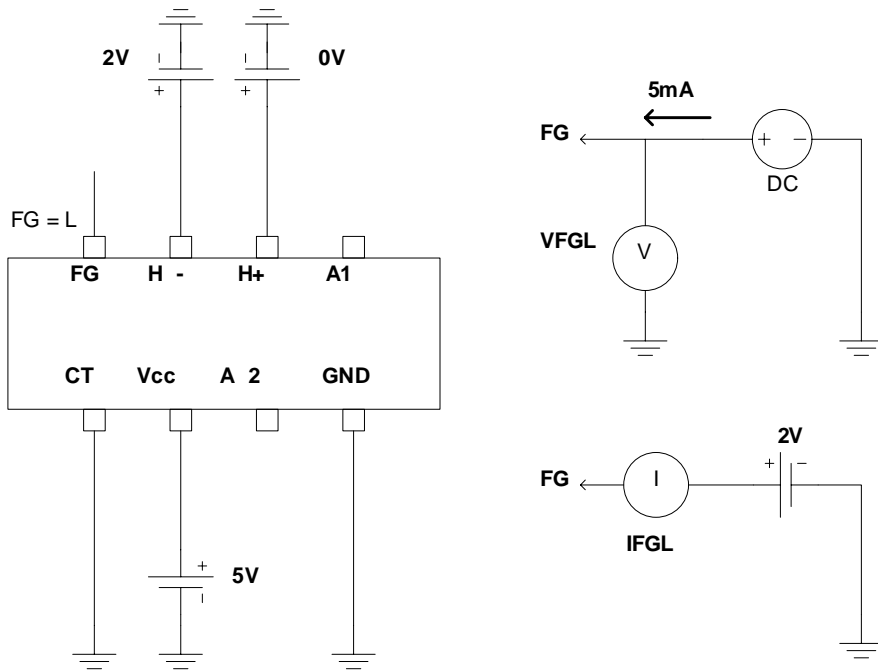


### 4. Hall input offset

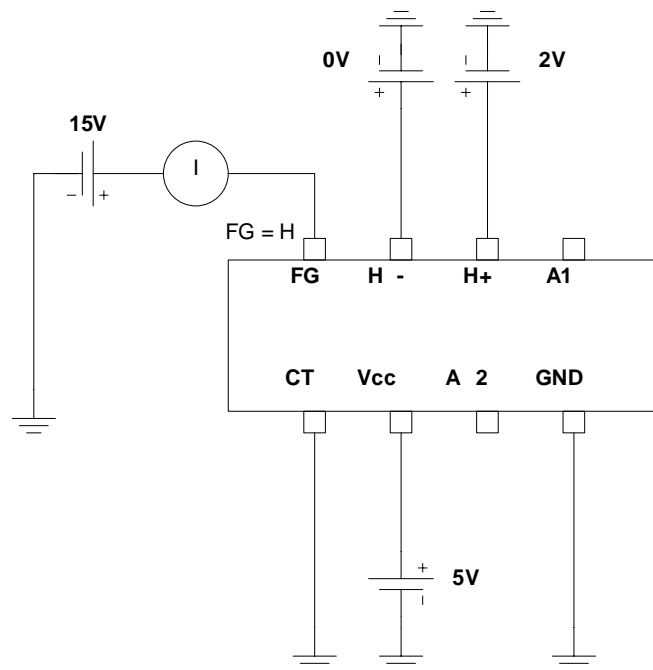


## ■ TEST CIRCUIT (Cont.)

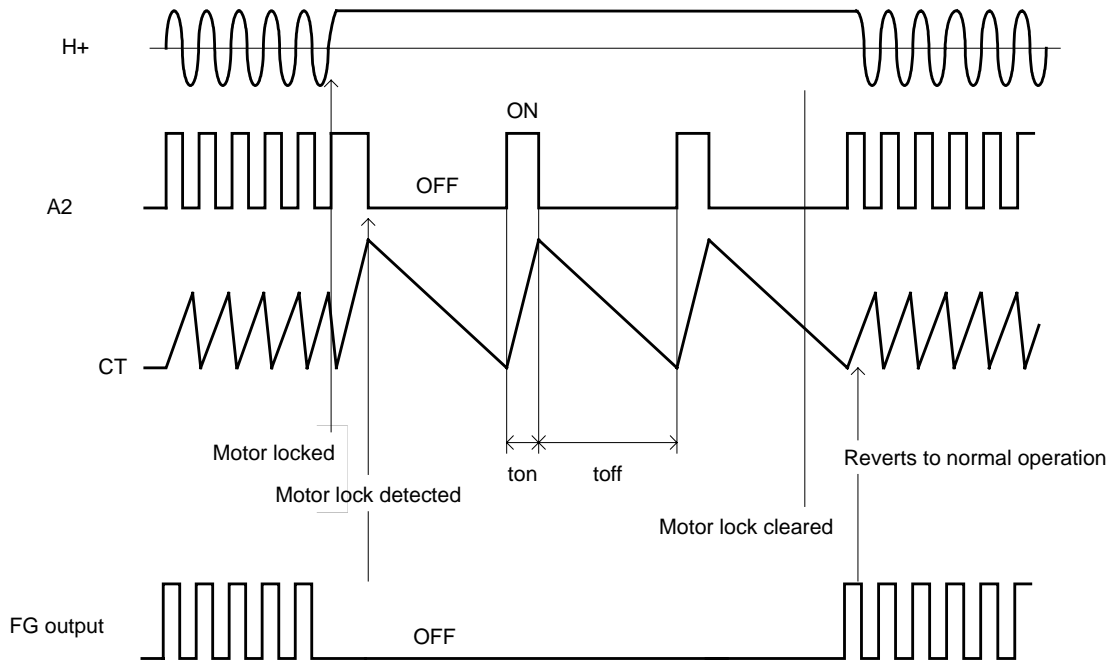
### 5. VFGL & IFGL



### 6. FG leakage



■ LOCK DETECTION



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.