

Features

- Highly Accurate: 2%
- Low Power Consumption: 0.7 A ($V_{IN}=1.5V$)
- Ultra small SSOT-24 (SC-82) Package

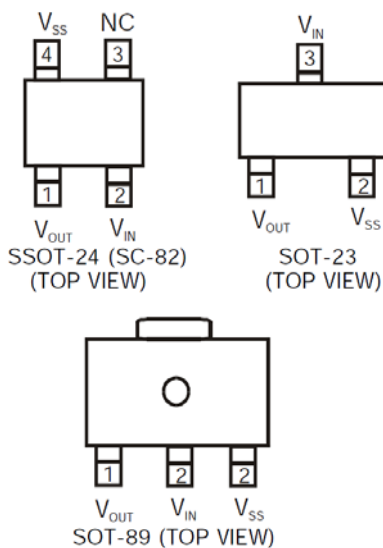
APPLICATIONS

- Microprocessor reset circuitry
- Memory battery back-up circuits
- Power-on reset circuits
- Power failure detection
- System battery life and charge voltage monitors

General Description

The LD6306 series are highly precise, low power consumption voltage detectors, manufactured using CMOS and laser trimming technologies. Detect voltage is extremely accurate with minimal temperature drift. Both CMOS and N channel open drain output configurations are available.

Package Pin Out



Ordering Information

Part No.	Package	Packing Options	
		Tube (TU)	Tape & Reel (TR)
LD6306	SOT-23	LD6306L1-TU	LD6306L1-TR
	SSOT-24	LD6306L9-TU	LD6306L9-TR
	SOT-89	LD6306L5-TU	LD6306L5-TR

- Package material default is "Green" package.

Product Marking

LD8888
SSSSS...

- ◇ Line 1 – "LD" is a fixed character
8888: product name
- ◇ Line 2 – SSSSS...: lot number

Pin Assignment

PIN NUMBER			PIN NAME	FUNCTION
SOT-24	SOT-23	SOT-89		
2	3	2	V_{IN}	Supply Voltage Input
4	2	3	V_{SS}	Ground
1	1	1	V_{OUT}	Output
3	-	-	NC	No Connection

Absolute maximum ratings over operating free-air temperature range

Parameter	Symbol	Condition	Unit
Input Voltage	V_{IN}	-40	V
Output Current	I_{OUT}	2	W
Output Voltage	CMOS V_{OUT}	$V_{SS}-0.3$ to $V_{IN}+0.3$	V
		$V_{SS}-0.3$ to 12V	
Power Dissipation	SSOT-24 SOT-23 SOT-89	Pd	150
			150
			500
Operating Ambient Temperature	T_A	-40 to +85	°C
Storage Temperature	T_S		°C
ESD rating	ESD	2	KV

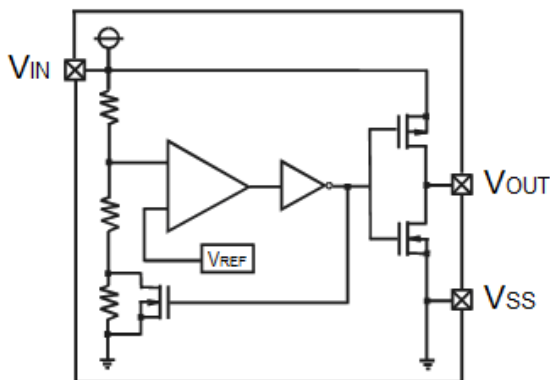
The values beyond the boundaries of absolute maximum rating may cause the damage to the device. Functional operation in this context is not implied. Continuous use of the device at the absolute rating level might influence device reliability. All voltages have their reference to device ground.

Electrical Characteristics

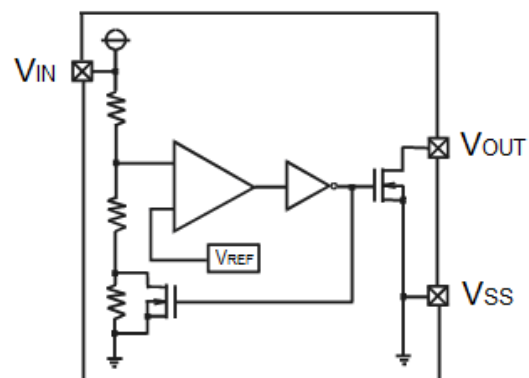
$V_{DF}(T) = 1.6$ to $6.0V$, $T_A = -40^{\circ}C$ to $+85^{\circ}C$, unless otherwise specified

Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Detect Voltage	V_{DF}	–	$V_{DF} \times 0.98$	V_{DF}	$V_{DF} \times 1.02$	V
Hysteresis Range	V_{HYS}	–	$V_{DF} \times 0.02$	$V_{DF} \times 0.05$	$V_{DF} \times 0.08$	V
Supply Current	I_{SS}	$V_{IN} = 1.5V$	–	0.7	2.3	A
		$V_{IN} = 2.0V$	–	0.8	2.7	
		$V_{IN} = 3.0V$	–	0.9	3.0	
		$V_{IN} = 4.0V$	–	1.0	3.2	
		$V_{IN} = 5.0V$	–	1.1	3.6	
Operating voltage	V_{IN}	$V_{DF}(T) = 1.6$ to $6.0V$	0.7	–	10.0	V
Output Current	I_{OUT}	$V_{IN} = 1.0V$	1.0	2.2	–	mA
		$V_{IN} = 2.0V$	3.0	7.7	–	
		$V_{IN} = 3.0V$	5.0	10.1	–	
		$V_{IN} = 4.0V$	6.0	11.5	–	
		$V_{IN} = 5.0V$	7.0	13.0	–	
Temperature Characteristics	$\Delta V_{DF} / \Delta T_A$	$-40^{\circ}C \leq T_A \leq 85^{\circ}C$	–	100	–	ppm/°C
Delay Time ($V_{DR} \rightarrow V_{OUT}$ inversion)	T_{DLY}	–	–	–	0.2	mS

Block Diagram

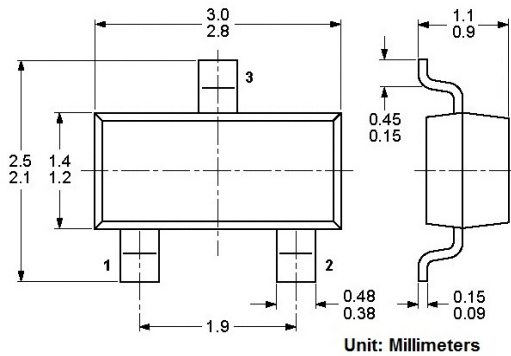


(1) CMOS Output

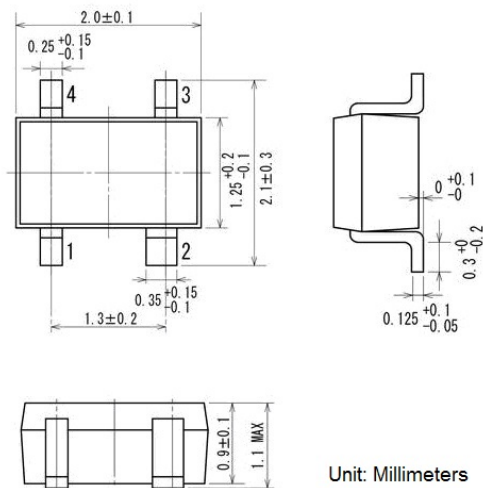


(2) NCH Open Drain Output

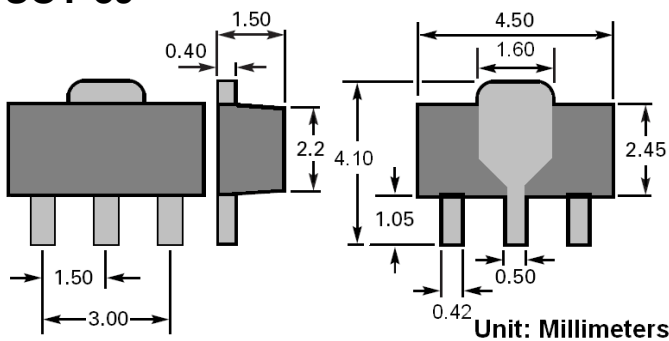
Package Outline SOT-23



SSOT-24



SOT-89



LD Tech Corporation

Tel: +886-3-567-8806
 Fax: +886-3-567-8706
 E-mail: sales@ldtech.com.tw
 Website: www.ldtech.com.tw