



## DESCRIPTION

The A4814 is a single lithium battery charge indicator chip, using CMOS process to achieve, small size and ease of installation of portable products.

The A4814 with built-in comparator and feedback loop, to materialize the detection of the four-voltage point. By the internal trimming technology, you can ensure that the voltage detection accuracy of  $\pm 2\%$ . The output using OPENDRAIN structure, ease of customer use IO ports or LED indication.

The A4814 is available in SOT-26 package.

## ORDERING INFORMATION

Package Type	Part Number	
SOT-26 SPQ: 3,000pcs/Reel	E6	A4814E6R
		A4814E6VR
Note	V: Halogen free Package R: Tape & Reel	
AiT provides all RoHS products		

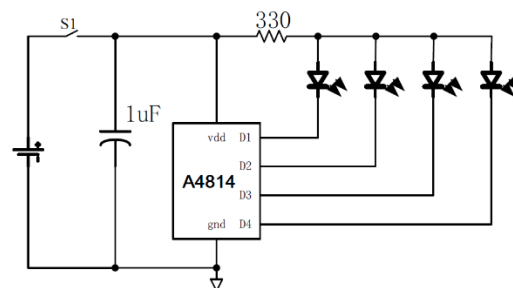
## FEATURES

- Ultra-low current consumption: $<10\mu\text{A}$
- Built - in 4-way comparator, the detection of the four voltage point
- The internal comparator with reasonable hysteresis, is easy to charge and discharge instructions.
- High-precision detection voltage $\pm 2\%$

## APPLICATIONS

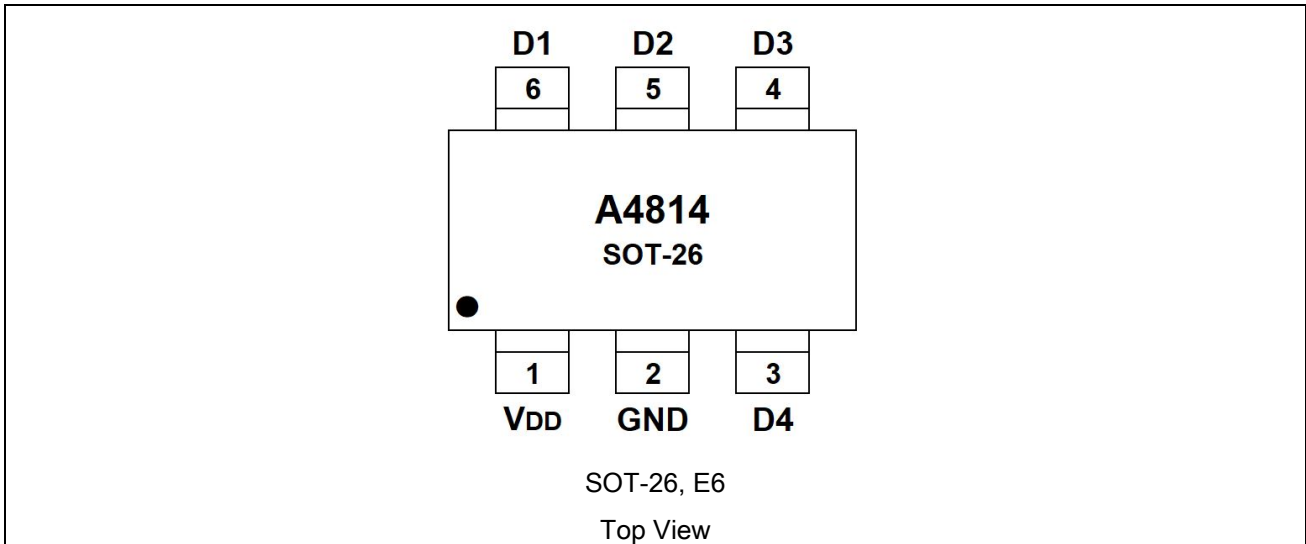
- Mobile Power
- LED flashlight

## TYPICAL APPLICATION





**PIN DESCRIPTION**



Pin #	Symbol	Function
1	V <sub>DD</sub>	Electric power source
2	GND	Ground terminal
3	D4	LED4 output indicates
4	D3	LED3 output indicates
5	D2	LED2 output indicates
6	D1	LED1 output indicates



## ABSOLUTE MAXIMUM RATINGS

Power supply voltage, $V_{DD}$	-0.3 ~ +7V
D1-D4 pressure-proof, $V_{D1} - V_{D4}$	-0.3 ~ $V_{DD} + 0.3V$
D1-D4 output current, $I_{D1} - I_{D4}$	30mA

Stresses above may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

## ELECTRICAL CHARACTERISTICS

( $T_A = 25^\circ C$ , Unless specifically designated)

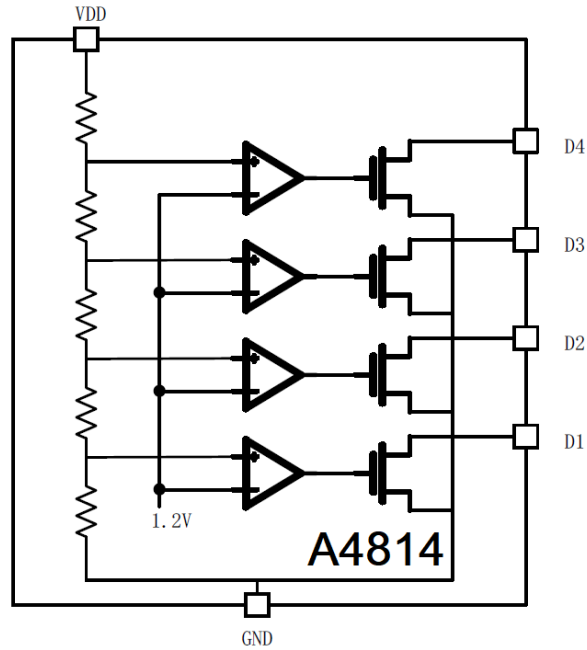
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Input supply voltage	$V_{CC}$		2	-	6.5	V
Output current	$I_{DX}$	$V_{CC} = 3.5V$	2	5	10	mA
Quiescent operating current	$I_{SS}$	$V_{CC} = 4.5V$	5	8	10	uA
$V_{D4}$ rising detect voltage	$V_{D4R}$	$V_{CC}$ rising	-	3.87	-	V
$V_{D4}$ falling detect voltage	$V_{D4D}$	$V_{CC}$ falling	-	3.80	-	
$V_{D3}$ rising detect voltage	$V_{D3R}$	$V_{CC}$ rising	-	3.70	-	
$V_{D3}$ falling detect voltage	$V_{D3D}$	$V_{CC}$ falling	-	3.64	-	
$V_{D2}$ rising detect voltage	$V_{D2R}$	$V_{CC}$ rising	-	3.55	-	
$V_{D2}$ falling detect voltage	$V_{D2D}$	$V_{CC}$ falling	-	3.50	-	
$V_{D1}$ rising detect voltage	$V_{D1R}$	$V_{CC}$ rising	-	3.40	-	
$V_{D1}$ falling detect voltage	$V_{D1D}$	$V_{CC}$ falling	-	3.10	-	

## LED STATE

BAT VOLTAGE RANGE ( V )	$V_{D1}$	$V_{D2}$	$V_{D3}$	$V_{D4}$
3.87-4.2	ON	ON	ON	ON
3.7-3.87	ON	ON	ON	OFF
3.55-3.7	ON	ON	OFF	OFF
3.4-3.55	ON	OFF	OFF	OFF
Below 3.4	OFF	OFF	OFF	OFF



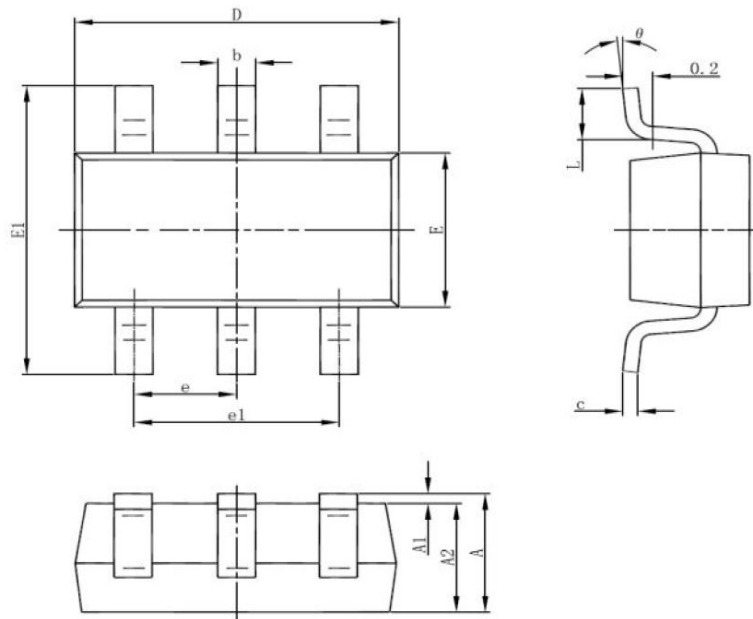
**BLOCK DIAGRAM**





**PACKAGE INFORMATION**

Dimension in SOT-26 (Unit: mm)



Symbol	MILLIMETERS	
	Min.	Max.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.820	3.020
E	1.500	1.700
E1	2.650	2.950
e	0.950(BSC)	
e1	1.800	2.000
L	0.300	0.600
θ	0°	8°



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