



## DESCRIPTION

The A4812 series is a series of high precision programmable voltage detectors developed by CMOS process. The detection voltage is programmable by external resistors with an accuracy of  $\pm 1.0\%$ . Two output forms, Nch open-drain active low and CMOS active high output, are available. Ultra-low current consumption and miniature package lineup can meet demand from the portable device applications.

The A4812 is available in SC70-5 package.

## ORDERING INFORMATION

Package Type	Part Number	
SC70-5	C5	A4812C5R
		A4812C5VR
Note	V: Halogen free Package R: Tape & Reel SPQ: 3,000pcs/Reel	
AiT provides all RoHS products Suffix " V " means Halogen free Package		

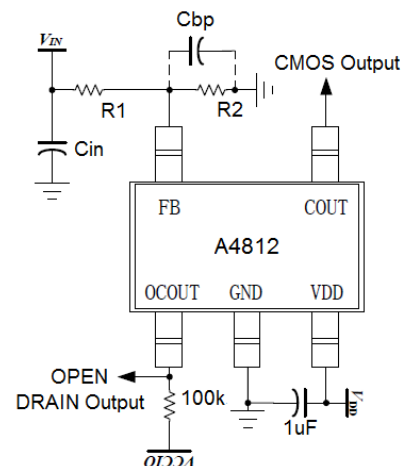
## FEATURES

- High-precision detection voltage  $\pm 1\%$
- Ultra-low current consumption  $4.0\mu\text{A typ.}$  ( $V_{IN}=3.0\text{V}$ )
- Operating voltage range  $0.7\text{V}$  to  $8.0\text{V}$
- Output form Nch open-drain output (Active Low) or CMOS output (Active Low)
- Detection voltage temperature characteristics  $\pm 100\text{ppm(typ.)}$
- Available in SC70-5 Package

## APPLICATION

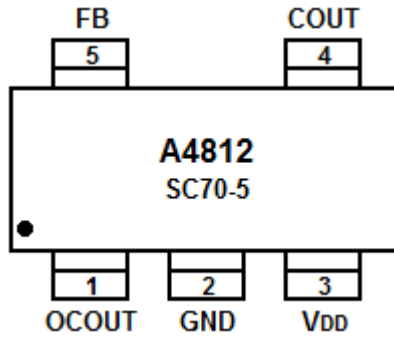
- Battery checkers
- Power failure detectors
- Power monitor for portable equipments such as pagers, calculators, electronic notebooks and remote controllers.
- Constant voltage power monitor for cameras, video equipments and communication devices.
- Power monitor for microcomputers and reset for CPUs.

## TYPICAL APPLICATION





## PIN DESCRIPTION



Top View

Pin #	Symbol	Function
1	OCOUT	NMOS open- anti- logic output pin
2	GND	GND pin
3	V <sub>DD</sub>	Voltage input pin
4	COUT	CMOS output pin
5	FB	Feedback input pin



## ABSOLUTE MAXIMUM RATINGS

V <sub>DD</sub> , Power supply voltage	8V
V <sub>FB</sub> , Feedback Voltage	8V
I <sub>OUT</sub> , Output Current	50mA
V <sub>OUT</sub> , Output Voltage	COUT V <sub>SS</sub> -0.3V ~ V <sub>DD</sub> +0.3V
	OCOUT V <sub>SS</sub> -0.3V ~ 8V
P <sub>D</sub> , Power Dissipation	SC70-5 150mW
T <sub>OPR</sub> , Operating Ambient Temperature	-40°C ~ +85°C
T <sub>STG</sub> , Storage Temperature	-40°C ~ +125°C

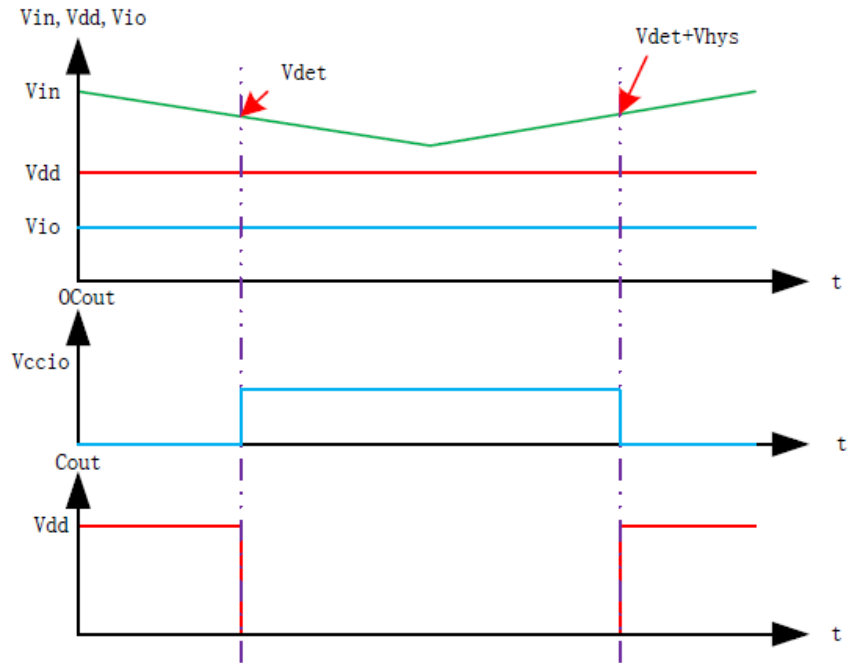
Stress beyond above listed "Absolute Maximum Ratings" may lead permanent damage to the device. These are stress ratings only and operations of the device at these or any other conditions beyond those indicated in the operational sections of the specifications are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

## ELECTRICAL CHARACTERISTICS

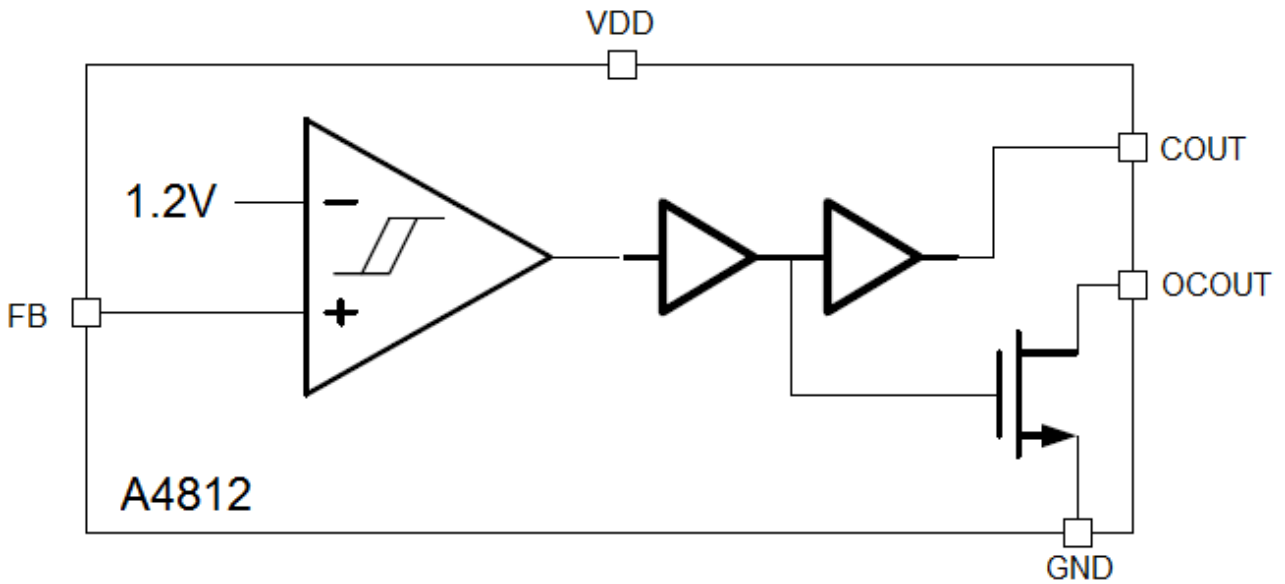
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Feedback Voltage	FB		1.188	1.2	1.212	V
Release Voltage	V <sub>HYS</sub>		V <sub>DD</sub> x0.02	V <sub>DD</sub> x0.03	V <sub>DD</sub> x0.04	V
Current Consumption	I <sub>SS</sub>	V <sub>DD</sub> =3.0V	1.5	3.5	4.5	uA
Power Supply Voltage	V <sub>DD</sub>		1.5		8	V
Output Current	I <sub>OUT</sub>	Nch V <sub>DS</sub> =0.5V	V <sub>DD</sub> =1.0V	1.0	2.2	mA
			V <sub>DD</sub> =2.0V	3.0	7.7	
			V <sub>DD</sub> =3.0V	5.0	10.1	
			V <sub>DD</sub> =4.0V	6.0	11.5	
			V <sub>DD</sub> =5.0V	7.0	13.0	
		Pch V <sub>DS</sub> =2.1 V <sub>DD</sub> =8.0		-10	-2	
Temperature Coefficient		-40°C ~ +85°C		±100		ppm/°C



**TIMING CHART**



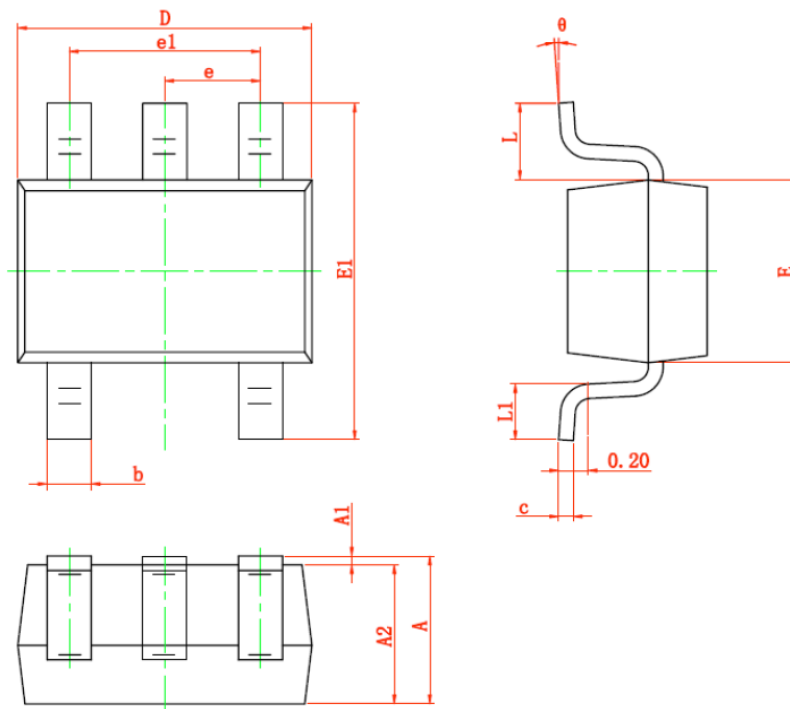
**BLOCK DIAGRAM**





## PACKAGE INFORMATION

Dimension in SC70-5 (Unit: mm)



Symbol	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
$\theta$	0°	8°



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