R3112x Series

Voltage Detector with Delay Function (External Capacitor Type)

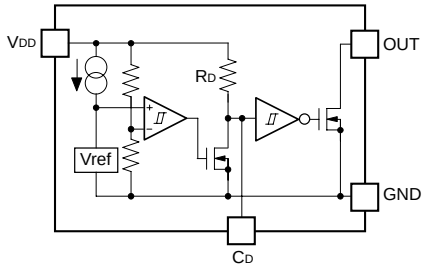
The R3112x Series are CMOS-based voltage detector ICs with the built-in output delay circuit. The delay time can be set with an external capacitor.

FEATURES

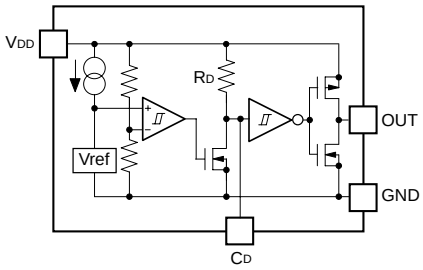
- Supply Current (I_{SS}) ····· Typ. 0.5µA (V_{DD}=-V_{DET}+1.0V, R3112x15x)
- Operating Voltage Range (V_{DD}) ····· 0.7V to 6.0V (Absolute maximum rating: 6.5V)
- Detector Threshold Range (-V_{DET}) ··· 0.9V to 5.0V (Internally fixed)
- Output Delay ····· Typ. 100ms delay set with a 0.022µF external capacitor
- Reset Signal ····· "L"
- Detector Threshold Accuracy ·····± 2%
- Temp. coeff. of Detector Threshold ··· Typ. ± 100ppm/°C
- Two Output Types ····· Nch. Open Drain and CMOS
- Packages ····· SON1612-6, SC-82AB, SOT-23-5

BLOCK DIAGRAMS

R3112xxxxA
(Nch. open drain output)



R3112xxxxC
(CMOS output)



SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	SON1612-6	4,000 pcs	R3112Dxx1*-TR-FE
H/F	SC-82AB	3,000 pcs	R3112Qxx1*-TR-FE
H/F	SOT-23-5	3,000 pcs	R3112Nxx1*-TR-FE

xx : Specify the detector threshold within the range of 0.9V (09) to 5.0V (50) in 0.1V steps.
* : Select the output type from (A) Nch. open drain or (C) CMOS.

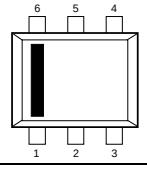
HOW TO DETERMINE DELAY TIME

Let the capacity of an external capacitor "C_D" (F), the delay time (t_D) is found from the following equation:

$$t_D\,(s) = 0.69 \times 6.5 \times 10^6 \times C_D$$

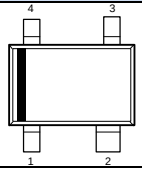
PACKAGES (Top View)

SON1612-6



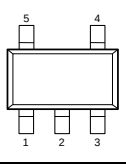
1	OUT
2	GND
3	CD
4	NC
5	GND
6	VDD

SC-82AB



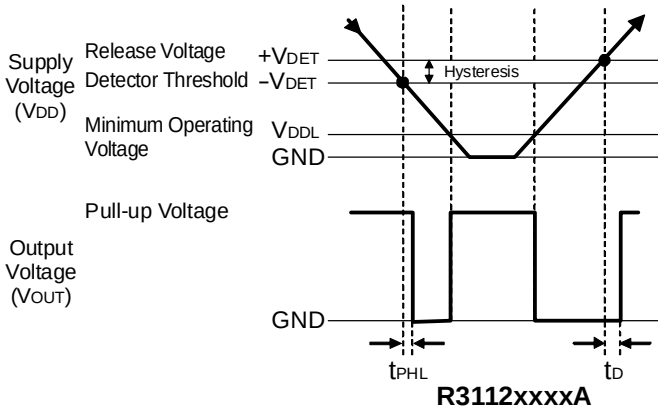
1	VDD
2	GND
3	CD
4	OUT

SOT-23-5

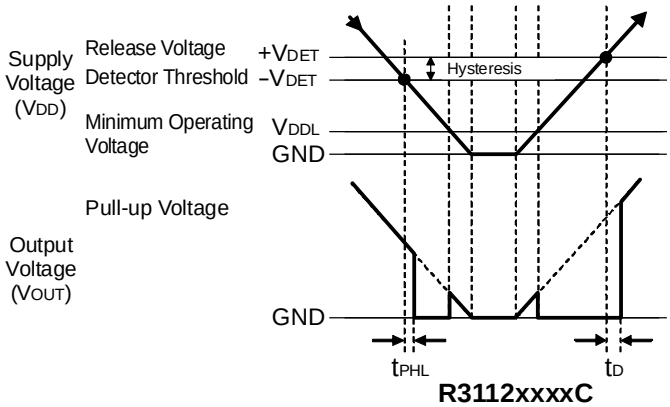


1	OUT
2	VDD
3	GND
4	NC
5	CD

TIMING CHARTS



R3112xxxxA



R3112xxxxC

APPLICATIONS

- Microcontroller and logic circuit reset
- Wave shaping circuit
- Battery checker
- Battery back-up circuit
- Window comparator
- Power failure detector

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