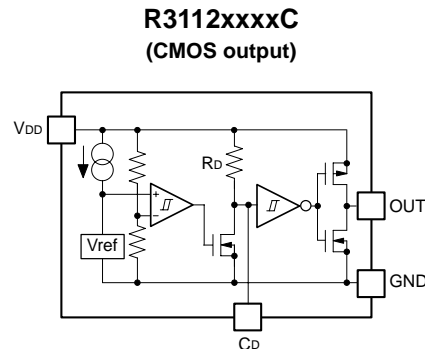
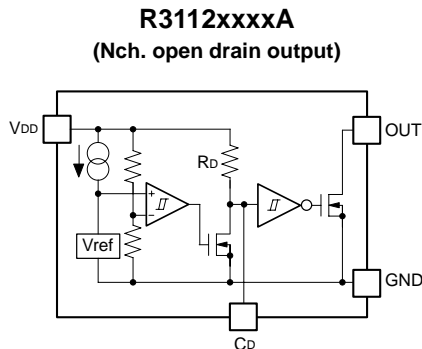


The R3112x Series are CMOS-based voltage detector ICs with the built-in output delay circuit, which can operate at low voltage. The delay time can be set with an external capacitor.

### FEATURES

- Supply Current ( $I_{SS1}$ ) ..... Typ. 0.5 $\mu$ A ( $V_{DD}=-V_{DET}+1V$ , R3112x15x)
- Operating Voltage Range ( $V_{DD}$ ) ..... 0.7V to 6.0V ( $T_{opt}=25^{\circ}C$ )
- Detector Threshold Range ( $-V_{DET}$ ) ..... 0.9V to 5.0V (internally fixed)
- Output Delay ..... Typ. 100ms delay set with a 0.022 $\mu$ F external capacitor
- Reset Signal ..... "L"
- Detector Threshold Accuracy .....  $\pm 2\%$
- Temp. coeff. of Detector Threshold ... Typ.  $\pm 100ppm/^{\circ}C$
- Two Output Types ..... Nch. Open Drain and CMOS
- Packages ..... SON1612-6, SC-82AB, SC-88A, SOT-23-5

### BLOCK DIAGRAMS

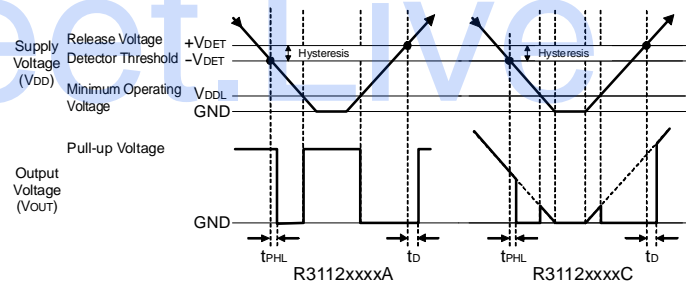


### SELECTION GUIDES

Package	Quantity per Reel	Part No.
SON1612-6	4,000 pcs	R3112Dxx1*-TR-F
SC-82AB	3,000 pcs	R3112Qxx1*-TR-F
SC-88A	3,000 pcs	R3112Qxx2*-TR-F
SOT-23-5	3,000 pcs	R3112Nxx1*-TR-F

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

### TIMING CHART



### PACKAGES (Top View)

SON1612-6	SC-82AB	SC-88A	SOT-23-5
1   OUT	1   VDD	1   VDD	1   OUT
2   GND	2   GND	2   NC	2   VDD
3   Cd	3   Cd	3   GND	3   GND
4   NC	4   OUT	4   Cd	4   NC
5   GND		5   OUT	5   Cd
6   VDD			

### HOW TO DETERMINE DELAY TIME

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

$$t_D = 0.69 \times 6.5 \times 10^6 \times C_D \text{ (s)}$$

### APPLICATIONS

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



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