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**Philipp et al.**

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(54) **PROXIMITY SENSOR**  
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(73) Assignee: **Atmel Corporation**, San Jose, CA (US)  
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(51) **Int. Cl.**  
**G01R 27/26** (2006.01)  
**G08B 13/08** (2006.01)

(52) **U.S. Cl.**  
USPC ..... 324/663; 340/545.4

(58) **Field of Classification Search**  
USPC ..... 324/663, 658, 649, 600; 702/57;  
340/545.4, 545.2, 545.1, 541, 540;  
381/74

See application file for complete search history.

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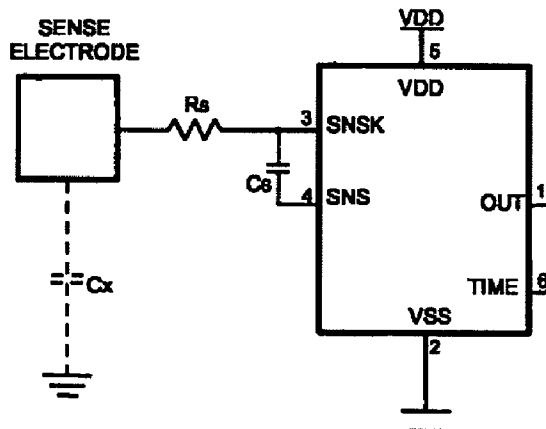
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(57) **ABSTRACT**

In one embodiment, a method includes monitoring detection by a sensing element of a key touch on a touch screen; determining an amount of time that has elapsed since the sensing element last detected a change of capacitance indicative of a key touch on the touch screen; and, if the amount of time that has elapsed exceeds a predetermined time duration, then initiating a particular function of an apparatus.

**20 Claims, 10 Drawing Sheets**



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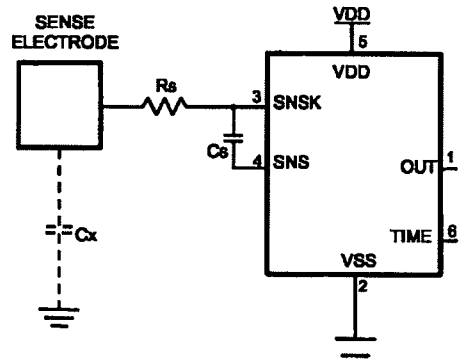


Fig. 1

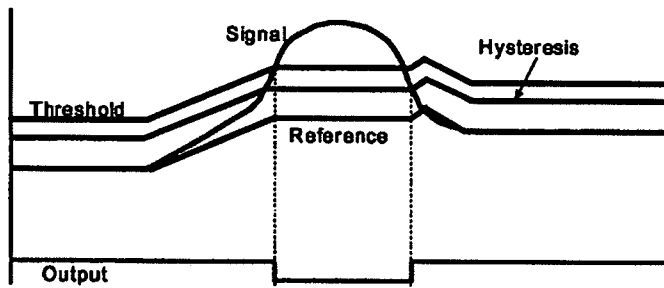


Fig. 2

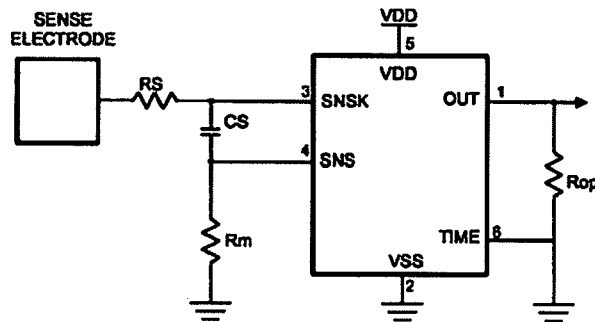
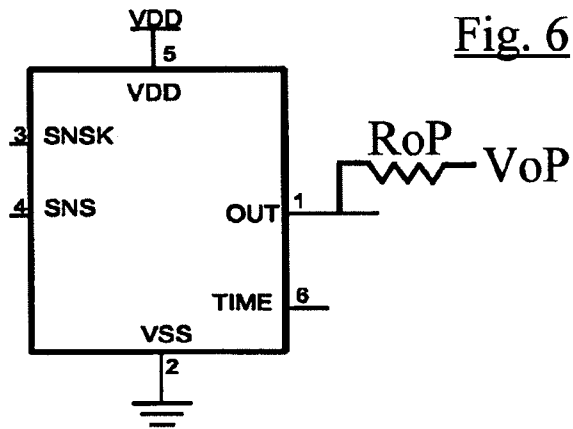
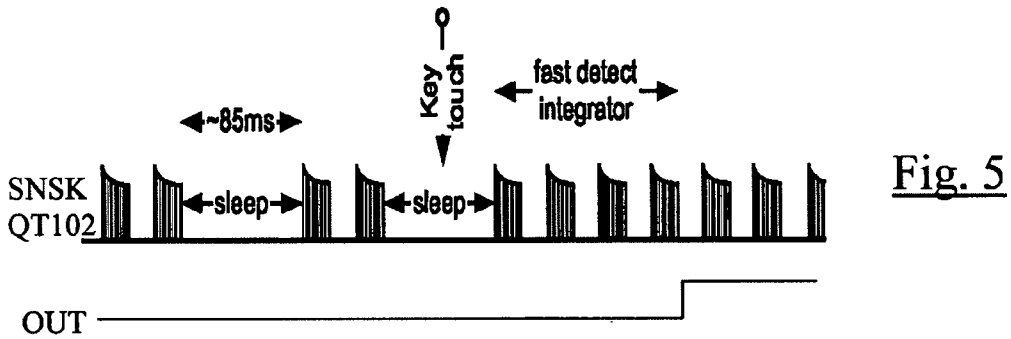
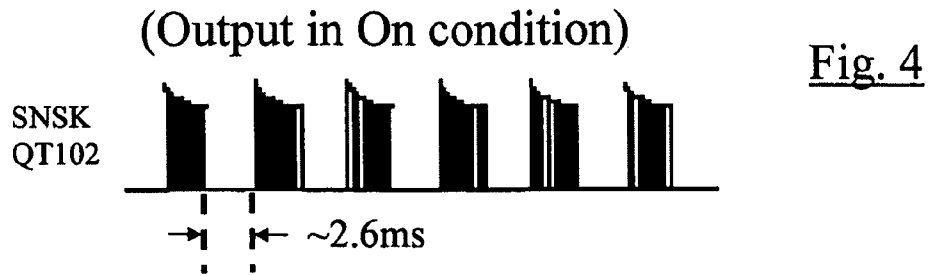


Fig. 3



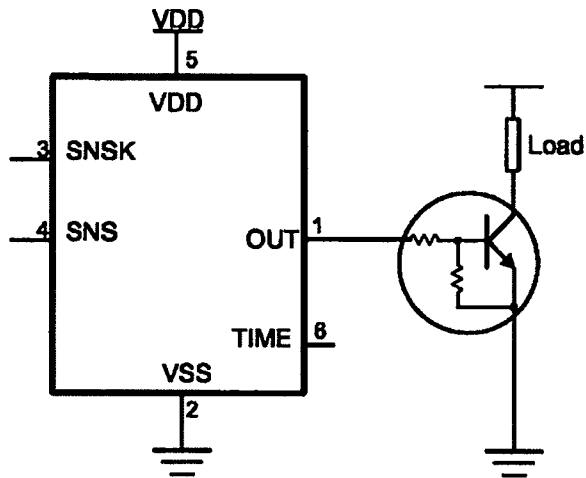


Fig. 7

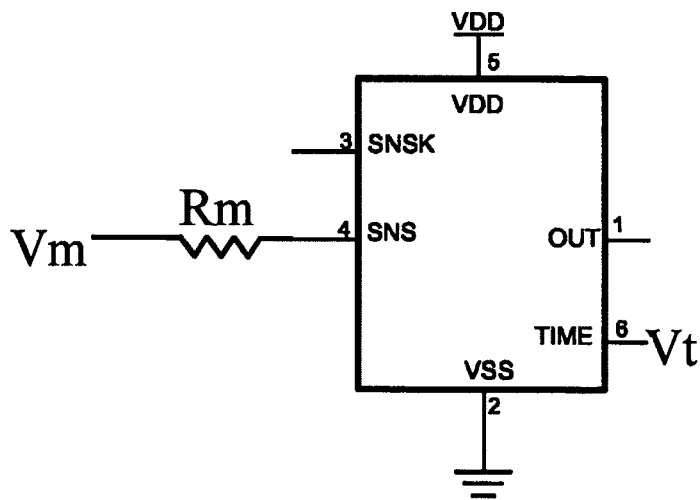


Fig. 8

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