1. Description

Based on Avia Semiconductor's patented technology, HX612 has 12 input channels, capable of controlling over 25 keys in a 2 dimensional key array arrangement. It has a very large controllable sensitivity/gain range, controlled by internal registers, independent for each input channels. This enables on chip sensitivity tuning of each channel to achieve optimal sensitivity matching of the channels, without any external component.

Patented dynamic analog chopping filter technology, high performance sigma-delta analog-to-digital converter combined with adaptive digital filtering and the advanced drift tracking algorithms provide the HX612 with superior performance under severe RF and switching power supply interference, temperature and humidity variations, static charge/discharge, and wet keyboard surface conditions.

2. Features

◆ 12 input channels, each can be turned on or off independently.

◆ Programmable sensitivity control for each channel, ensuring sensitivity matching between channels without any external components.

◆ Self-adaptive calibration; calibration time is less than 7.5mS, can response to new touch key event quickly, even when key is touched during power up.

◆ 3 detection mode: quick touch, slow(long time) touch and single/array mixed mode.

◆ 3 touch key event interruption sources for MCU interruption; interruption can be falling edge, low voltage or rising edge.

◆ 2 operation modes: full speed mode and scan mode. In scan mode, 12-channel key scan time can be programmed to 25~800mS. The switch time between the 2 operation modes can be programmed to 1~7S.

◆ Low power consumption; current is less than 25uA in 50mS scan mode(@VDD=3.3V, any key wakeup).

◆ 2 wire serial interface communication: SCL and SDA.

◆ Operation voltage: 2.9~3.6V.

◆ Operation temperature: -40~+80℃.

◆ SOP-16L package.