

WT5700

Capacitive Touch Key Sensor

Product Description

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1 General Description

WT5700 is a 12-key capacitive touch key sensor. It is designed for replacing button and also can be configured as matrix scan function. WT5700 has low power consumption, so it is suitable for consumer products and portable applications.

1.1. Features

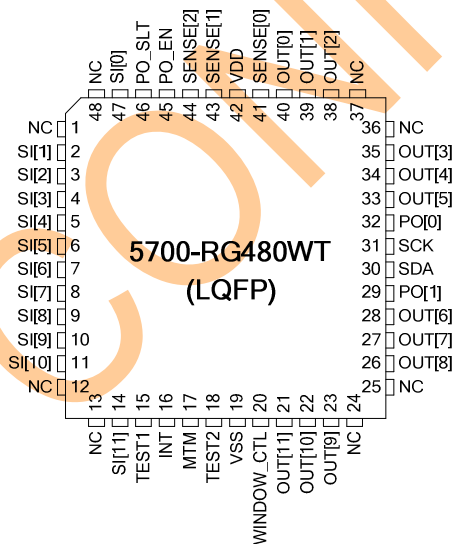
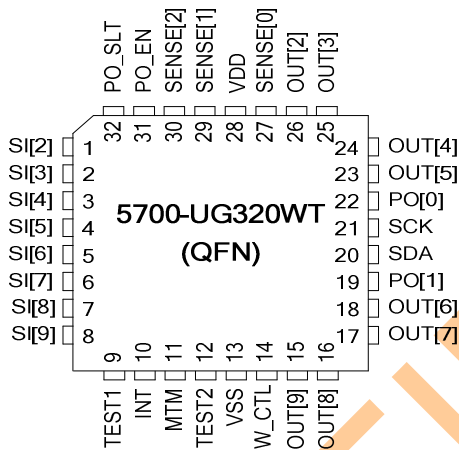
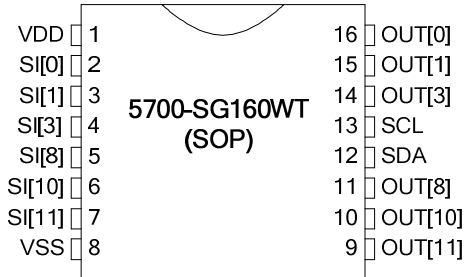
- 12-channel input sensor
- Auto sensitivity calibration
- Low operating current
 - 3.3V: Typical 130uA
 - 5.0V: Typical 315uA
- Wild operating voltage: 2.2V ~ 5.5V
- High throughput output
- Open-drain digital output with maximum drain current 8mA
- 2 output modes
 - Direct output: 12 output pad (open drain output)
 - Serial output(I2C) and include interrupt pin
- Sensitivity option pins
- Power down mode and slow down mode supported
- Output polarity option: active high or active low
- Anti-noise circuit embedded
- Package type
 - LQFP 48
 - QFN 32
 - SOP 16

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2. Pin Assignment

2.1. Package





2.2. Ordering information

Package Type	Package Outline	Part Number
SOP 16 pin	150mil	5700-SG160WT
QFN 32 pin	5mm * 5 mm	5700-UG320WT
LQFP 48 pin	7mm * 7 mm	5700-RG480WT

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2.3. Pin description

R480	U320	S160	Pin Name	I/O	Function Description
2		3	SI[1]	A	Capacitive sensor input[1]
3	1		SI[2]	A	Capacitive sensor input[2]
4	2	4	SI[3]	A	Capacitive sensor input[3]
5	3		SI[4]	A	Capacitive sensor input[4]
6	4		SI[5]	A	Capacitive sensor input[5]
7	5		SI[6]	A	Capacitive sensor input[6]
8	6		SI[7]	A	Capacitive sensor input[7]
9	7	5	SI[8]	A	Capacitive sensor input[8]
10	8		SI[9]	A	Capacitive sensor input[9]
11		6	SI[10]	A	Capacitive sensor input[10]
14		7	SI[11]	A	Capacitive sensor input[11]
15	9		TEST1	I	Test mode pin
16	10		INT	O	Interrupt output
17	11		MTM	I	Multi touch mode select input (pull high)
18	12	8	TEST2	I	Test mode pin
19	13	8	VSS	P	ground
20	14		WIN_CTL	I	Window of sensitivity select input (pull high)
21		9	OUT[11]	O	Channel of output[11] (Open drain)
22		10	OUT[10]	O	Channel of output[10] (Open drain)
23	15		OUT[9]	O	Channel of output[9] (Open drain)
26	16	11	OUT[8]	O	Channel of output[8] (Open drain)
27	17		OUT[7]	O	Channel of output[7] (Open drain)
28	18		OUT[6]	O	Channel of output[6] (Open drain)
29	19		PO[1]	O	PO[1] output
30	20	12	SDA	I/O	I2C SDA pin
31	21	13	SCL	I/O	I2C SCL pin
32	22		PO[0]	O	PO[0] output
33	23		OUT[5]	O	Channel of output[5] (Open drain)
34	24		OUT[4]	O	Channel of output[4] (Open drain)
35	25	14	OUT[3]	O	Channel of output[3] (Open drain)
38	26		OUT[2]	O	Channel of output[2] (Open drain)
39		15	OUT[1]	O	Channel of output[1] (Open drain)
40		16	OUT[0]	O	Channel of output[0] (Open drain)
41	27		SENSE[0]	I	Sensitivity control [0] (pull high)
42	28	1	VDD	P	VDD
43	29		SENSE[1]	I	Sensitivity control [1] (pull high)
44	30		SENSE[2]	I	Sensitivity control [2] (pull high)
45	31		PO_EN	I	PO output enable (for power saving) (pull high)
46	32		PO_SLT	I	PO output selection (pull high)
47		2	SI[0]	A	Capacitive sensor input[0]

3. Functional Block Diagram

