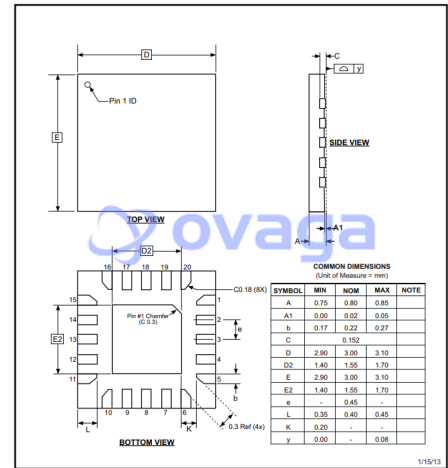


Capacitive Touch Sensor, Qtouch®, Serial, 1.8 V, 5.5 V, VQFN, 20 Pins, -40 °C

Manufacturers	<a href="#">Microchip Technology, Inc</a>
Package/Case	VQFN-20
Product Type	Integrated Circuits (ICs)
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for AT42QT1040-MMHR or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

Digital burst mode, charge-transfer capacitive sensor driver designed for touch-key applications. It can sense from one to four keys-one to three keys can be disabled by not installing their respective sense capacitors. The device includes all signal processing functions necessary to provide stable sensing under a wide variety of changing conditions. The outputs are fully debounced. Only a few external parts are required for operation. The device modulates its bursts in a spread-spectrum fashion in order to heavily suppress the effects of external noise and to suppress RF emissions.

## Features

Four discrete outputs indicating individual key touch

Technology: Patented spread-spectrum charge-transfer (direct mode)

Electrode Design: Simple self-capacitance style

Electrode Materials: Etched copper, silver, carbon, Indium Tin Oxide (ITO)

Electrode Substrates: PCB, FPCB, plastic films, glass

Panel Materials: Plastic, glass, composites, painted surfaces (low particle density metallic paints possible)

Panel Thickness: Up to 10 mm glass, 5 mm plastic (electrode size dependent)

Key Sensitivity: Fixed key threshold, sensitivity adjusted via sample capacitor value

Patented Adjacent Key Suppression® (AKS®) technology to enable accurate key detection

Interface: Pin-per-key outputs, plus debug mode to observe sensor signals

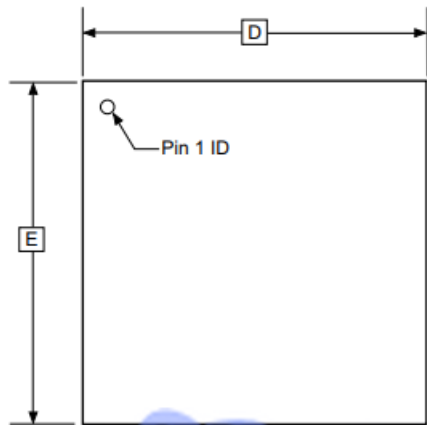
Moisture Tolerance: Increased moisture tolerance based on hardware design and firmware tuning

Signal Processing: Self-calibration, auto drift compensation, noise filtering

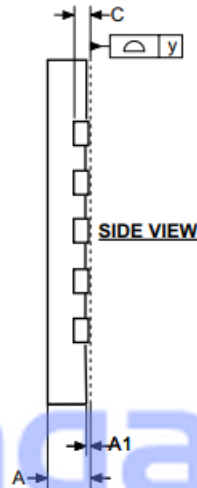
Applications: Mobile, consumer, white goods, toys, kiosks, POS

Power: 1.8 V – 5.5 V

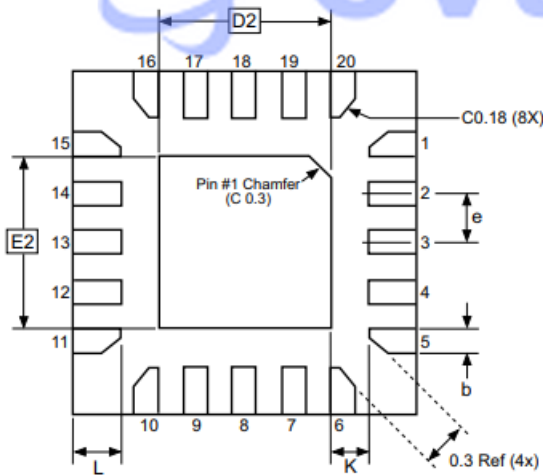
Package: 20-pin 3 x 3 mm VQFN RoHS compliant



**TOP VIEW**



**SIDE VIEW**

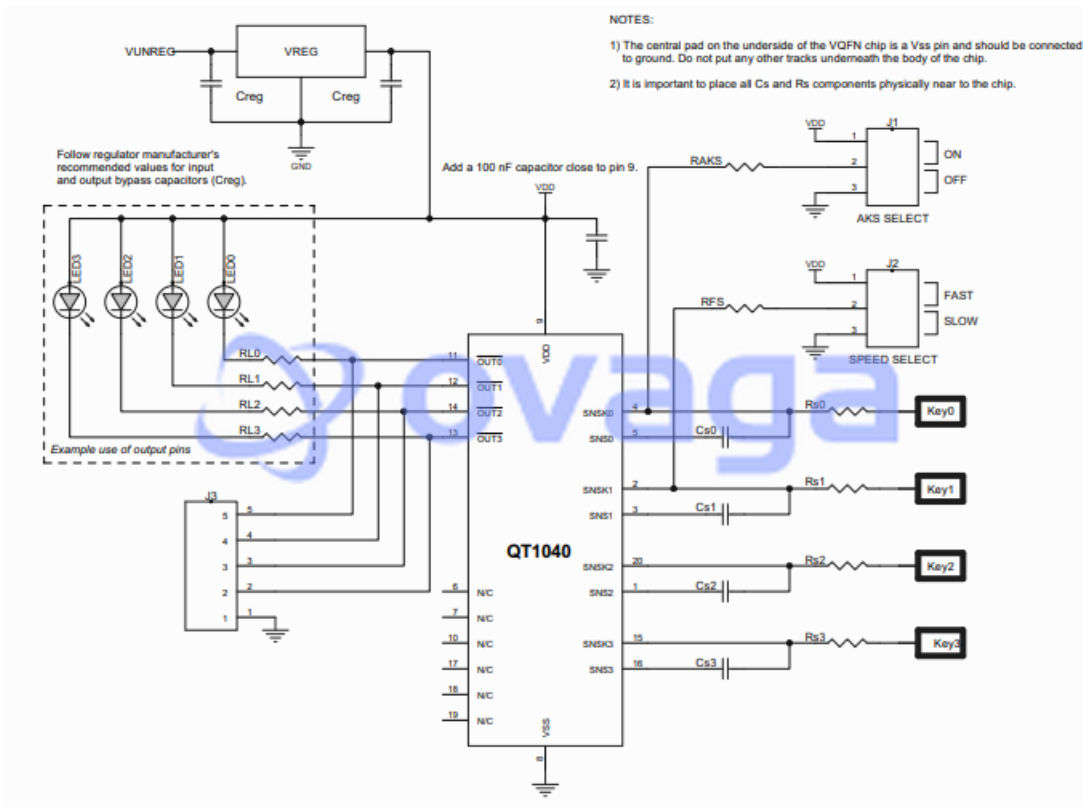


**BOTTOM VIEW**

**COMMON DIMENSIONS**  
(Unit of Measure = mm)

SYMBOL	MIN	NOM	MAX	NOTE
A	0.75	0.80	0.85	
A1	0.00	0.02	0.05	
b	0.17	0.22	0.27	
C	0.152			
D	2.90	3.00	3.10	
D2	1.40	1.55	1.70	
E	2.90	3.00	3.10	
E2	1.40	1.55	1.70	
e	-	0.45	-	
L	0.35	0.40	0.45	
K	0.20	-	-	
y	0.00	-	0.08	

1/15/13



## Related Products



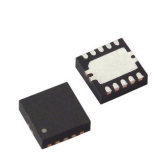
### [ATA6563-GAQW0](#)

Microchip Technology, Inc  
SOIC-8



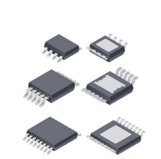
### [AT30TS74-SS8M-T](#)

Microchip Technology, Inc  
SOIC-8



### [ATSAMC21G17A-MZTVAO](#)

Microchip Technology, Inc  
VQFN



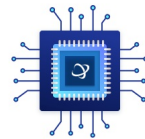
### [ATTINY3224-SSU](#)

Microchip Technology, Inc  
SOIC



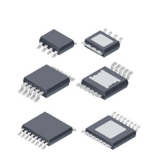
### [AT30TSE004A-MAA5M-T](#)

Microchip Technology, Inc  
WDFN-8



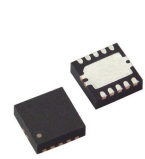
### [ATMEGA808-MU](#)

Microchip Technology, Inc



### [ATTINY3226-SU](#)

Microchip Technology, Inc  
SOIC



### [ATTINY1626-MU](#)

Microchip Technology, Inc  
VQFN