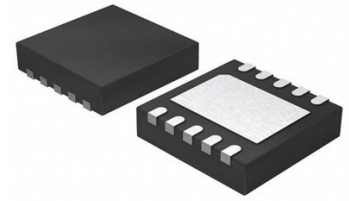


Capacitance to Digital Converter 0.4ksps 24bit Automotive 10-Pin WSON EP T/R



Images are for reference only

[Inquiry](#)

Manufacturer:	Texas Instruments, Inc
Package/Case:	WSON10
Product Type:	Discrete Semiconductor Modules
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active

General Description

Capacitive sensing with grounded capacitor sensors is a very low-power, low-cost, high-resolution contact-less sensing technique that can be applied to a variety of applications ranging from proximity sensing and gesture recognition to material analysis and remote liquid level sensing. The sensor in a capacitive sensing system is any metal or conductor, allowing for low cost and highly flexible system design.

The FDC1004 is a high-resolution, 4-channel capacitance-to-digital converter for implementing capacitive sensing solutions. Each channel has a full scale range of ± 15 pF and can handle a sensor offset capacitance of up to 100 pF, which can be either programmed internally or can be an external capacitor for tracking environmental changes over time and temperature. The large offset capacitance capability allows for the use of remote sensors.

The FDC1004 also includes shield drivers for sensor shields, which can reduce EMI interference and help focus the sensing direction of a capacitive sensor. The small footprint of the FDC1004 allows for use in space-constrained applications. The FDC1004 is available in a 10-pin WSON and VSSOP package and features an I2C interface for interfacing to an MCU.

Key Features

Input Range: ± 15 pF

Measurement Resolution: 0.5 fF

Maximum Offset Capacitance: 100 pF

Programmable Output Rates: 100/200/400 S/s

Maximum Shield Load: 400 pF

Supply Voltage: 3.3 V

Temp Range: -40° to 125° C

Current Consumption:

Standby: 29 μ A

Interface: I2C

Number of Channels: 4

Recommended For You

FDC1004DGSR

Texas Instruments, Inc

VSSOP10

FDC1004QDGSRQ1

Texas Instruments, Inc

VSSOP-10

FDC1004DGST

Texas Instruments, Inc

VSSOP10