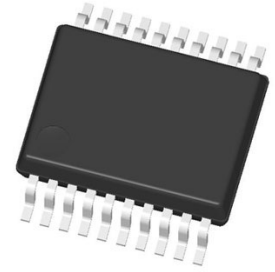


AFE General Purpose 1 ADC 24bit 3.3V Automotive Medical 20-Pin SSOP Tube



Images are for reference only

[Inquiry](#)

Manufacturer: [Microchip Technology, Inc](#)

Package/Case: SSOP-20

Product Type: Data Conversion ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

General Description

The MCP3918 is a 2.7V to 3.6V single channel Analog Front End (AFE) containing a Delta-Sigma Analog-to-Digital Converter (ADC), PGA, internal voltage reference, modulator output block, and highspeed 20 MHz SPI compatible serial interface. For polyphase shunt based energy meters, the MCP3918 2-wire serial interface greatly reduces system cost requiring only a single bidirectional isolator per phase. The MCP3918 is capable of interfacing a large variety of voltage and current sensors including shunts, current transformers, Rogowski coils and Hall effect sensors

Key Features

16/24-bit Resolution Delta-Sigma A/D Converter

Flexible serial interface that includes both SPI and a simple 2-wire interface ideal for polyphase shunt energy meters

93.5 dB SINAD, -106.5 dBc THD

2.7V - 3.6V AVDD, DVDD

Programmable Data Rate up to 125 ksps- 4 MHz Maximum Sampling Frequency

Oversampling Ratio up to 4096

Ultra Low Power Shutdown Mode with <2 μ A

Low Drift 1.2V Internal Voltage Reference: 9 ppm/ $^{\circ}$ C

Differential Voltage Reference Input Pins

High Gain PGA on Each Channel (up to 32V/V)

Phase Delay Compensation with 1 μ s Time Resolution

Separate Data Ready Pin for Easy Synchronization

24-bit Digital Offset and Gain Error Correction

High-Speed 20 MHz SPI Interface with Mode 0,0 and 1,1 Compatibility

Continuous Read/Write Modes for Minimum Communication

Low Power Consumption

Available in Small 20-lead QFN and SSOP Packages

Specifications valid down to -45 $^{\circ}$ C operation

AEC-Q100 Grade 1

Recommended For You

MCP3911A0-E/SS

Microchip Technology, Inc

SSOP20

MCP3008-I/P

Microchip Technology, Inc

DIP-16

MCP3201T-CI/SN

Microchip Technology, Inc

SOP8

MCP3208-CI/P

Microchip Technology, Inc

DIP

MCP3001-I/SN

Microchip Technology, Inc

SOP8

MCP3208-BI/P

Microchip Technology, Inc

DIP-16

MCP4822-E/P

Microchip Technology, Inc

DIP-8

MCP3421A0T-E/CH

Microchip Technology, Inc

SOT23-6

MCP3425A0T-E/CH

Microchip Technology, Inc

SOT23-6

MCP3427-E/UN

Microchip Technology, Inc

MSOP10

MCP3550-50E/SN

Microchip Technology, Inc

SOP8

MCP3422A0-E/SN

Microchip Technology, Inc

SOP-8

MCP3553-E/SN

Microchip Technology, Inc

SOP8

MCP3422A1-E/SN

Microchip Technology, Inc

SOP-8

MCP3208T-CI/SL

Microchip Technology, Inc

SOP