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DSPIC33FJ256MC710A-I/PF

Data Sheet

Digital Signal Controller, dsPIC33F Series, 40 MHz, 256 KB, 85 I/O's, CAN, I2C, SPI, UART, 2.75 V

Manufacturers	Microchip Technology, Inc	
Package/Case	TQFP-100	Junion and the
Product Type	Embedded Processors & Controllers	The culture
RoHS	Rohs	
Lifecycle		Images are for reference only
Please submit RFQ for DSPIC33FJ256MC710A-I/PF or Email to us: sales@ovaga.com We will contact you in 12 hours.		

General Description

ThedsPIC33FJ256MC710A family of devices supports a variety of motorcontrol applications, such as brushless DC motors, single and 3-phase inductionmotors and switched reluctance motors. The dsPIC33F Motor Control products arealso well-suited for Uninterrupted Power Supply (UPS), inverters, Switched modepower supplies, power factor correction and also for controlling the powermanagement module in servers, telecommunication equipment and other industrial equipment. These devices are also available in extended operating temperatureoptions.

Features

Operating Conditions

3.0V to 3.6V, -40°C to +150°C, DC to 20 MIPS

3.0V to 3.6V, -40°C to +125°C, DC to 40 MIPS

Qualification and Class B Support

AEC-Q100 REVG (Grade 1 -40°C to +125°C)

AEC-Q100 REVG (Grade 0 -40°C to +150°C)

Class B Safety Library, IEC 6073

Core: 16-bit dsPIC33F CPU

Code-efficient (C and Assembly) architecture

Two 40-bit wide accumulators

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Single-cycle (MAC/MPY) with dual data fetch

Single-cycle mixed-sign MUL plus hardware divide

Clock Management

Programmable PLLs and oscillator clock sources

Fail-Safe Clock Monitor (FSCM)

Independent Watchdog Timer (WDT)

Fast wake-up and start-up

Power Management

Low-power management modes (Sleep, Idle, Doze)

Integrated Power-on Reset and Brown-out Reset

1.35 mA/MHz dynamic current (typical)

55 μ A IPD current (typical)

Motor Control PWM

Up to four PWM generators with eight outputs

Dead Time for rising and falling edges

12.5 ns PWM resolution

PWM support for Motor Control: BLDC, PMSM, ACIM and SRM

Programmable Fault inputs

Flexible trigger for ADC conversions and configurations

Advanced Analog Features

Two ADC modules

Configurable as 10-bit, 1.1 Msps with four S&H or 12-bit,500 ksps with one S&H

18 analog inputs on 64-pin devices and up to

32 analog inputs on 100-pin devices

Flexible and independent ADC trigger sources

Timers/Output Compare/Input Capture

Up to nine 16-bit timers/counters. Can pair up to make four 32-bit timers

Eight Output Compare modules configurable as

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timers/counters

- Eight Input Capture modules
- Communication Interfaces
- Two UART modules (10 Mbps)
- Support for LIN 2.0 protocols and IrDA®
- Two 4-wire SPI modules (15 Mbps)
- Up to two I2CTM modules (up to 1 Mbaud) with SMBus support
- Up to two Enhanced CAN (ECAN) modules (1 Mbaud) with 2.0B support
- Quadrature Encoder Interface (QEI) module
- Data Converter Interface (DCI) module with I2S codec support
- Input/Output
- 5V-tolerant pins
- Selectable open drain, pull-ups, and pull-downs
- Up to 5 mA overvoltage clamp current
- External interrupts on all I/O pins

Related Products



DSPIC30F6014A-20E/PF Microchip Technology, Inc TQFP-80







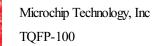
DSPIC33FJ256MC710-I/PF Microchip Technology, Inc TQFP-100



DSPIC33EP512MU814-I/PH

Microchip Technology, Inc TQFP-144

DSPIC33EP512GM710-I/PF



DSPIC33FJ256GP710-I/PF



Microchip Technology, Inc TQFP-100



DSPIC30F5015-30I/PT

Microchip Technology, Inc TQFP-64



DSPIC30F4011-30I/PT

Microchip Technology, Inc TQFP-44