

Digital Signal Controller, dsPIC33F Series, 40 MHz, 128 KB, 53 I/O's, I2C, SPI, UART, 3.3 V

Manufacturers	Microchip Technology, Inc
Package/Case	TQFP-64
Product Type	Embedded Processors & Controllers
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for DSPIC33FJ128GP706A-I/PT or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

•dsPIC33Fs are designed to execute digital filter algorithms and high-speed precision digital control loops, ideal for applications that need to perform under pressure

•General Purpose Digital Signal Controllers (DSCs) with advanced analog and seamless migration options to PIC24F, PIC24H MCUs and dsPIC30F DSCs

Features

Operating Conditions

Up to 40 MIPS operation

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

High-performance dsPIC33F core

Code-efficient (C and Assembly) architecture

Two 40-bit wide accumulators

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

2.1 mA/MHz dynamic current (typical)

50 μ A IPD current (typical)

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 timers/counters

Eight Input Capture modules Communication Interfaces

Two UART modules (10 Mbps) - With support for LIN 2.0 protocols and IrDA®

Two 4-wire SPI modules (15 Mbps)

Up to two I2C™ modules (up to 1 Mbaud) with SM Bus support

Up to two Enhanced CAN (ECAN) modules (1 Mbaud) with CAN 2.0B support

Data Converter Interface (DCI) module with I2S codec support

Input/Output

Sink/Source up to 10 mA (pin specific) for standard VOH/VOL, up to 16 mA (pin specific) for non-standard VOH1

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

Debugger Development Support

In-circuit and in-application programming

Two program and two complex data breakpoints

IEEE 1149.2-compatible (JTAG) boundary scan

Trace and run-time watch

Related Products



[DSPIC30F6014A-20E/PE](#)

Microchip Technology, Inc
TQFP-80



[DSPIC33EP512MU814-I/PH](#)

Microchip Technology, Inc
TQFP-144



[DSPIC30F5011-30I/PT](#)

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TQFP-64



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TQFP-44