element I 4 Your Electronic Engineering Resource



dsPIC33FJ64GS406 High-Performance, 16-bit Digital Signal Controllers

General Description:

dsPIC33FJXXGSXXX SMPS & Digital Power Conversion 16-bit Digital Signal Controller. These devices offer features supporting common, multi-loop digital switch-mode power supplies (SMPS) and other digital power-conversion applications such as: • AC to DC Converters • DC to DC Converters • Power Factor Correction (PFC) • Uninterruptible power supply (UPS) • Inverters • Embedded Power-Supply Controllers • Circuit Breakers, Arc Fault Detection





Legal Disclaimer: The content of the pages of this website is for your general information and use only. It is subject to change without notice. From time to time, this website may also include links to other websites. These links are provided for your convenience to provide further information. They do not signify that we endorse the website(s). We have no responsibility for the content of the linked website(s). Your use of any information or materials on this website meet your own risk, for which we shall not be liable. It shall be your own responsibility to ensure that any products, services or information available through this website meet your specific requirements.

element 14 Your Electronic Engineering Resource

Key Features:

- Up to 40 MIPS Operation (at 3.0-3.6V)
- 16 x 16 Fractional/Integer Hardware Multiply, Single Cycle Execution
- Single-Cycle Multiply and Accumulate
- 32-bit by 16-bit Hardware Divider
- C Compiler Optimized Instruction Set System
- Internal oscillator and Phase-Locked Loop (PLL) with 120 MHz VCO
- On-chip LDO Voltage Regulator
- JTAG Boundary Scan and Flash Memory Program Support
- Fail-Safe Clock Monitor allows safe shutdown if clock fails
- Watchdog Timer with separate RC oscillator Power Managed Modes
- Run, Idle and Sleep modes
- Multiple, Switchable Clock Modes for Optimum Performance and Power Management High-Speed PWM Module Features
- Up to Nine PWM Generators with up to Eighteen Outputs
- Dead Time for Rising and Falling Edges
- Duty Cycle Resolution of 1.04 ns for Dead-Time, Phase Shift, and Frequency
- Supported PWM modes: Standard Edge-Aligned, True Independent Output, Complementary, Center-Aligned, Push-Pull, Multi-Phase, Variable Phase, Fixed Off-Time, Current Reset, and Current-Limit
- PWMxL, PWMxH Output Pin Swapping
- PWM4H, PWM4L Pins Remappable
- On-the-Fly PWM Frequency, Duty Cycle and Phase Shift Changes High-Speed Analog Comparator
- Up to Four Analog Comparators
- 20 ns response time
- 10-bit DAC for each analog comparator
- DACOUT pin to provide DAC output High-Speed 10-Bit ADC
- 10-Bit Resolution
- Up to 24 Input Channels Grouped into Six Conversion Pairs
- 4 Msps or 2 Msps Conversion rate
- Independent Trigger Source Section for each Analog Input Conversion Pair Peripherals
- UART Module with LIN and IrDA® support
- SPI Module with FIFO
- I2C[™] Modules with Master and Slave Modes
- ECAN Module
- Up to 4 16-bit Timer Modules
- Up to 4 Input Capture and 4 Output Compare / PWM

Applications:

• AC-to-DC Converters

element 4 Your Electronic Engineering Resource

- Automotive HID
- Battery Chargers
- DC-to-DC Converters
- Digital Lighting
- Induction Cooking
- LED Ballast
- Renewable Power/Pure Sine Wave Inverters
- Uninterruptible Power Supply (UPS)

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
DSPIC33FJ64GS406-I/PT	1823293	08R1551	16 Bit MCU/DSP 40MIPS 64KB FLASH, TRAY,
			10x10x1mm, 64 TQFP
DSPIC33FJ64GS610-I/PT	1823294	08R1566	16 Bit MCU/DSP 40MIPS 64KB FLASH
			100 ,TRAY, 12x12x1mm, 100 TQFP
DSPIC33FJ32GS610-I/PT	1823202	08R1545	16 Bit MCU/DSP 40MIPS 32KB FLASH, TRAY,
			12x12x1mm, 100 TQFP
DSPIC33FJ32GS406-I/PT	1823203	08R1530	16 Bit MCU/DSP 40MIPS 32KB FLASH, TRAY,
			10x10x1mm,64 TQFP
DSPIC33FJ32GS606-I/PT	1823204	08R1536	16 Bit MCU/DSP 40MIPS 32KB FLASH, TRAY,
			10x10x1mm, 64 TQFP
DSPIC33FJ64GS606-I/PT	1823205	08R1557	16 Bit MCU/DSP 40MIPS 64KB FLASH, TRAY,
			10x10x1mm,64 TQFP

