

# FM2306A Single-Phase Multi-Rate Watt-Hour Meter IC

FM2306A provides low cost, high reliability single chip solution of Multi-Rate Watt-Hour Meter. It can implement different region protocol of single phase Multi-Rate Watt-Hour Meter; support both mechatronics Watt-Hour Meter and full electronic Watt-Hour Meter. It can directly drive dual-rate register, LED and LCD. FM2306A can perform accurate timing, time-stage management, energy statistic, data maintenance, programming configuration, pulse output, meter-constant setup, infrared and 485 communications according to "Single-phase Multi-rate Watt-Hour Meter Technical Specification".

## Key Feature

- Low power Real Time Clock, still run after power off
- Non-Volatile Pulse Count circuit
- Double-photoelectric pulse sample circuit, compatible with both full electronic Watt-Hour Meter and Mechatronics Watt-Hour Meter
- Two UART's one can be configured as infrared modulation
- 4x24 LCD display driver /12x8 LED scan display
- Embedded PLL circuit, generates MCU clock
- Embedded temperature sensor and ADC, crystal oscillator's temperature compensate
- Battery voltage detecting circuit
- Voltage monitor circuit, includes power on reset, power off reset and low voltage detection
- Hardware WatchDog
- Backup power also support capacitance and battery
- 128 bytes Non-Volatile RAM
- Embedded 2Kx8 EEPROM, support 32 bytes page write method
- Embedded MCU, compatible with PIC16C6X, 8Kx14, MTP ROM, 368x8 RAM

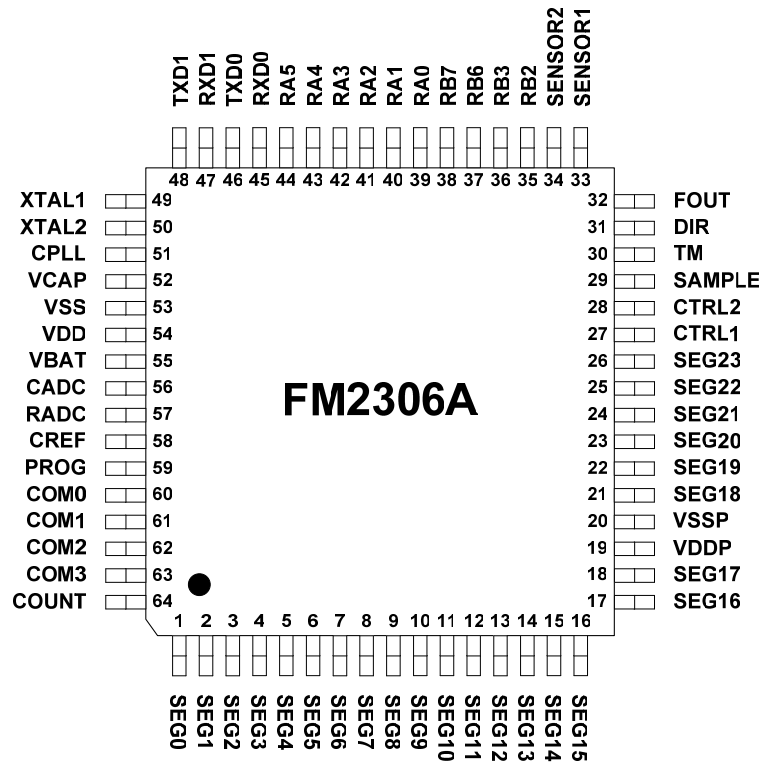
## Electrical Characteristics

- Operating temperature: - 40°C ~ + 85°C
- Operating voltage: 4.5V~5.5V
- Operating current:
  - ◇ Typical high-speed mode: 4.5mA
  - ◇ Typical Low-speed mode: 0.5μA
  - ◇ Clock maintaining mode: less than 0.5μA

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## Pin Assignment

QFP64 (14mm x 14mm)



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## Function Diagram

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