

DALLAS
SEMICONDUCTOR

DS1285/DS1285Q
Real Time Clock

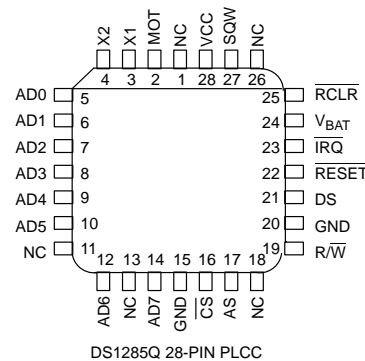
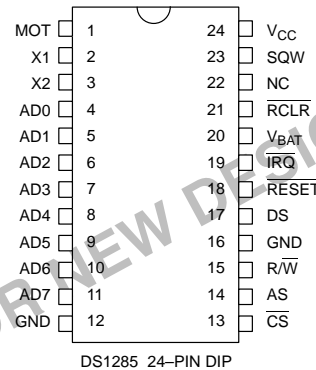
FEATURES

- Drop-in replacement for IBM AT computer clock/calendar
- Pin configuration closely matches MC146818A
- Counts seconds, minutes, hours, day of the week, date, month, and year with leap year compensation
- Binary or BCD representation of time, calendar, and alarm
- 12- or 24-hour clock with AM and PM in 12-hour mode
- Daylight Savings Time option
- Selectable between Motorola and Intel bus timing
- Multiplex bus for pin efficiency
- Interfaced with software as 64 RAM locations
 - 14 bytes of clock and control registers
 - 50 bytes of general purpose RAM
- Programmable square wave output signal
- Bus compatible interrupt signals ($\overline{\text{IRQ}}$)
- Three interrupts are separately software-maskable and testable
 - Time-of-day alarm once/second to once/day
 - Periodic rates from 122 μs to 500 ms
 - End of clock update cycle
- Optional 28-pin PLCC surface mount package

DESCRIPTION

The DS1285 Real Time Chip is a direct replacement for the MC146818A in IBM AT computer clock/calendar and other applications. For a complete description of operating conditions, electrical and mechanical characteristics, bus timing, and pin descriptions see the DS12885 data sheet.

PIN ASSIGNMENT



PIN DESCRIPTION

- AD0-AD7 – Multiplexed Address/Data Bus
- NC – No Connection
- MOT – Bus Type Selection
- $\overline{\text{CS}}$ – Chip Select
- AS – Address Strobe
- $\text{R}/\overline{\text{W}}$ – Read/Write Input
- DS – Data Strobe
- $\overline{\text{RESET}}$ – Reset Input
- $\overline{\text{IRQ}}$ – Interrupt Request Output (open drain)
- SQW – Square Wave Output
- V_{CC} – +5 Volt Supply
- GND – Ground
- X1,X2 – 32.768 KHz Crystal Connections
- V_{BAT} – +3 Volt Battery Input
- RCLR – RAM Clear