Real Time Clock Serial 160byte
Clock/Calendar/Alarm/Timer/Interrupt 28-Pin SOX T/R

Manufacturer:	STMicroelectronics, Inc
Package/Case:	SOP28
Product Type:	Clock & Timer ICs
RoHS:	RoHS Compliant/Lead free RoHS
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

The M41ST87Y/W secure serial RTC and NVRAM supervisor is a low power 1280-bit, static CMOS SRAM organized as 160 bytes by 8 bits. A built-in 32.768 kHz oscillator (internal crystal-controlled) and 8 bytes of the SRAM are used for the clock/calendar function and are configured in binary coded decimal (BCD) format.

An additional 11 bytes of RAM provide calibration, status/control of alarm, watchdog, tamper, and square wave functions. 8 bytes of ROM and finally 128 bytes of user RAM are also provided. Addresses and data are transferred serially via a two line, bidirectional I2C interface. The built-in address register is incremented automatically after each WRITE or READ data byte. The M41ST87Y/W has a built-in power sense circuit which detects power failures and automatically switches to the battery supply when a power failure occurs. The energy needed to sustain the SRAM and clock operations can be supplied by a small lithium button-cell supply when a power failure occurs.

Functions available to the user include a non-volatile, time-of-day clock/calendar, alarm interrupts, tamper detection, watchdog timer, and programmable square wave output. Other features include a power-on reset as well as two additional debounced inputs (RSTIN1and RSTIN2) which can also generate an output reset (RST). The eight clock address locations contain the century, year, month, date, day, hour, minute, second and tenths/hundredths of a second in 24-hour BCD format. Corrections for 28, 29 (leap year), 30 and 31 day months are made automatically.

Key Features

PFD

CC

PFD

CC

PFD

CC

PFD

CC

Two independent power-fail comparators (1.25 V reference)

Counters for tenths/hundredths of seconds, seconds, minutes, hours, day, date, month, year, and century

128 bytes of clearable, general purpose NVRAM

Recommended For You

M41T62LC6F	**M48T35Y-70PC1**	**M48T18-150PC1**
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
CLCC8	DIP	DIP
M48T58Y-70PC1	**M48T08-150PC1**	**M41ST85WMH6F**
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
DIP	DIP	SOP28
M48T08-100PC1	**M41ST85WMX6TR**	**M48T58-70PC1**
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
DIP	SOP28	DIP
M48T12-150PC1	**M41T93SMY6F**	**M41T66Q6F**
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
DIP	SOP18	QFN16
M41T94MQ6F	**M41T62Q6F**	**M41T94MH6F**
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
SOP16	QFN16	SOH-28