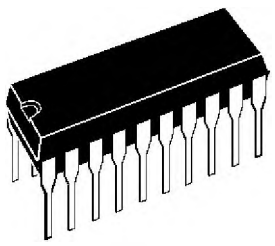
SGS-THOMSON MICROELECTRONICS

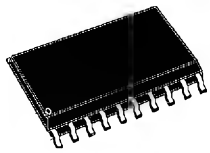
ST6260B
ST6263B

8-BIT MCUs WITH A/D CONVERTER, AUTO-RELOAD TIMER, EEPROM AND SPI

- 3.0 to 6.0V Supply Operating Range
- 8 MHz Maximum Clock Frequency
- -40 to +85°C Operating Temperature Range
- Run, Wait and Stop Modes
- 5 Interrupt Vectors
- Look-up Table capability in Program Memory
- Data Storage in Program Memory: User selectable size
- Data RAM: 64/128 bytes
- Data EEPROM: 64/128 bytes
- 13 I/O pins, fully programmable as:
  - Input with pull-up resistor
  - Input without pull-up resistor
  - Input with interrupt generation
  - Open-drain or push-pull output
  - Analog Input
- 6 I/O lines can sink up to 20mA to drive LEDs or TRIACs directly
- 8-bit Timer/Counter with 7-bit programmable prescaler
- 8-bit Auto-reload Timer with 7-bit programmable prescaler (AR Timer)
- Digital Watchdog
- 8-bit A/D Converter with 7 analog inputs
- 8-bit Synchronous Peripheral Interface (SPI)
- On-chip Clock oscillator can be driven by Quartz Crystal Ceramic resonator or RC network
- User configurable Power-on Reset
- One external Non-Maskable Interrupt
- ST626x-EMU2 Emulation and Development System (connects to an MS-DOS PC via an RS232 serial line).



PDIP20



PSO20

(See end of Datasheet for Ordering Information)

1 GENERAL DESCRIPTION

1.1 INTRODUCTION

The ST6263B and ST6260B are mask programmed ROM versions of ST62T63B and ST62T60B OTP devices.

They offer the same functionality as OTP devices, selecting as ROM options the options defined in the programmable option byte of the OTP version.

1.2 ROM READOUT PROTECTION

If the ROM READOUT PROTECTION option is selected, a protection fuse can be blown to prevent any access to the program memory content.

In case the user wants to blow this fuse, high voltage must be applied on the TEST pin.

Figure 1. Programming wave form

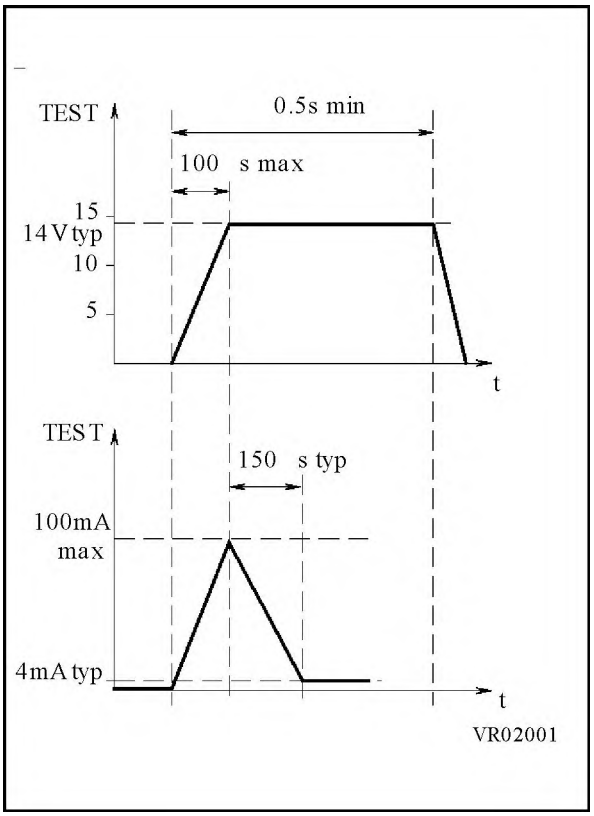
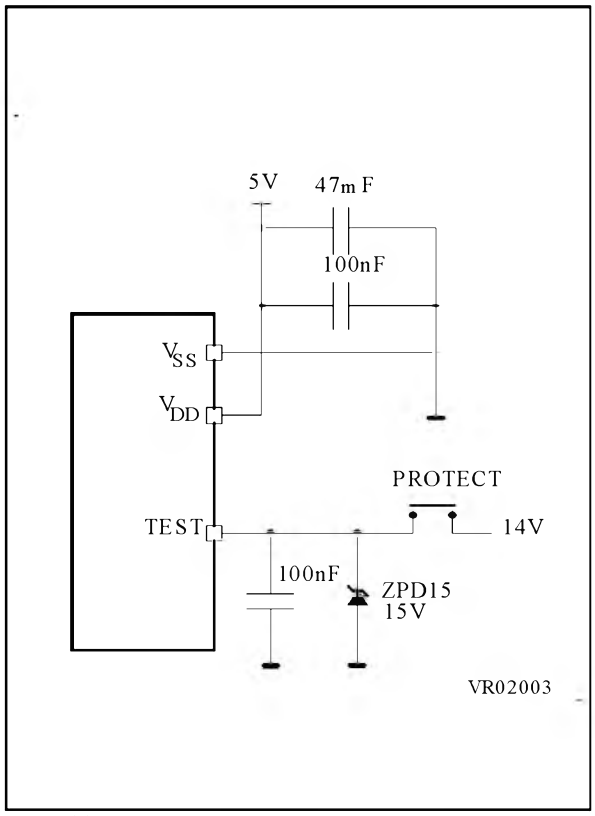


Figure 2. Programming Circuit



Note: ZPD15 is used for overvoltage protection

ST6260B and ST6263B MICROCONTROLLER OPTION LIST

Customer . . . . . .
Address . . . . . .
. . . . . .
Contact . . . . . .
Phone No . . . . . .
Reference . . . . . .

SGS-THOMSON Microelectronics references

Device: [ ] ST6260B and ST6263B

Package: [ ] Dual in Line Plastic [ ] Small Outline Plastic

In this case, select conditioning

[ ] Standard (Stick)

[ ] Tape & Reel

Temperature Range: [ ] 0°C to + 70°C [ ] - 40°C to + 85°C

Special Marking: [ ] No

[ ] Yes "_ _ _ _ _ _ _ _ _ _ "

Authorized characters are letters, digits, '.', '-', '/' and spaces only.

Maximum character count: DIP20: 10

SO20: 8

Oscillator Source Selection: [ ] Crystal Quartz/Ceramic resonator (Default)

[ ] RC Network

Watchdog Selection: [ ] Software Activation (STOP mode available)

[ ] Hardware Activation (no STOP mode)

Power on Reset Delay

[ ] 32768 cycle delay

[ ] 2048 cycle delay

ROM Readout Protection: [ ] Standard (Fuse cannot be blown)

[ ] Enabled (Fuse can be blown by the customer)

Note: No part is delivered with protected ROM.
The fuse must be blown for protection to be effective.

External STOP Mode Control

[ ] Enabled

[ ] Disabled (Default)

Comments :

Supply Operating Range in the application:

Oscillator Fequency in the application:

Notes . . . . . .

Signature . . . . . .

Date . . . . . .

1.3 ORDERING INFORMATION

The following section deals with the procedure for transfer of customer codes to SGS-THOMSON.

1.3.1 Transfer of Customer Code

Customer code is made up of the ROM contents and the list of the selected mask options. The ROM contents are to be sent on diskette, or by electronic means, with the hexadecimal file generated by the development tool. All unused bytes must be set to FFh.

The selected mask options are communicated to SGS-THOMSON using the correctly filled OPTION LIST appended.

1.3.2 Listing Generation and Verification

When SGS-THOMSON receives the user's ROM contents, a computer listing is generated from it. This listing refers exactly to the mask which will be used to produce the specified MCU. The listing is then returned to the customer who must thoroughly check, complete, sign and return it to SGS-THOMSON. The signed listing forms a part of the contractual agreement for the creation of the specific customer mask.

The SGS-THOMSON Sales Organization will be pleased to provide detailed information on contractual points.

Table 1. ROM Memory Map for ST6260B

Device Address	Description
0000h-007Fh	Reserved
0880h-0F9Fh	User ROM
0FA0h-0FEFh	Reserved
0FF0h-0FF7h	Interrupt Vectors
0FF8h-0FFBh	Reserved
0FFCh-0FFDh	NMI Interrupt Vector
0FFEh-0FFFh	Reset Vector

Table 2. ROM Memory Map for ST6263B

Device Address	Description
0000h-087Fh	Reserved
0880h-0F9Fh	User ROM
0FA0h-0FEFh	Reserved
0FF0h-0FF7h	Interrupt Vectors
0FF8h-0FFBh	Reserved
0FFCh-0FFDh	NMI Interrupt Vector
0FFEh-0FFFh	Reset Vector

Table 3. ROM version Ordering Information

Sales Type	ROM	I/O	Additional Features	Temperature Range	Package
ST6260BB1/XXX ST6260BB6/XXX	3884 Bytes	13	A/D CONVERTER SPI	0 to +70°C -40 to + 85°C	PDIP20
ST6260BM1/XXX ST6260BM6/XXX				0 to +70°C -40 to + 85°C	PSO20
ST6263BB1/XXX ST6263BB6/XXX	1836 Bytes		A/D CONVERTER	0 to +70°C -40 to + 85°C	PDIP20
ST6263BM1/XXX ST6263BM6/XXX				0 to +70°C -40 to + 85°C	PSO20