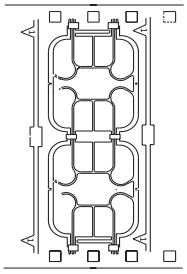
ST1200

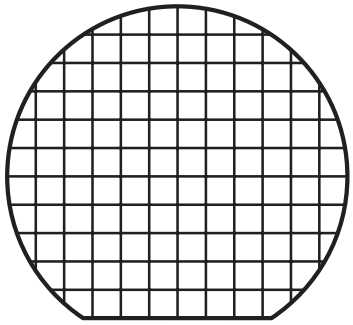
Memory Card IC
256 bit OTP EPROM with Lock-Out

DATA BRIEFING

- 256 x 1 bit Organisation
- 96 bits Protected in Write Mode By Lock-Out Fuse
- 5 V Power Supply (V_{CC}) and 21 V Programming Voltage (V_{PP})
- 85 mW in Read Mode
- Power On Reset
- Very High Reliability Level
- Standard Delivery: Wafer Form and Micromodule Package



Micromodule (D10)



Wafer

DESCRIPTION

The ST1200 is a 256 bit OTP (one time programmable) EPROM, organized as 256 x 1, manufactured using ST's highly reliable and well proven NMOS technology.

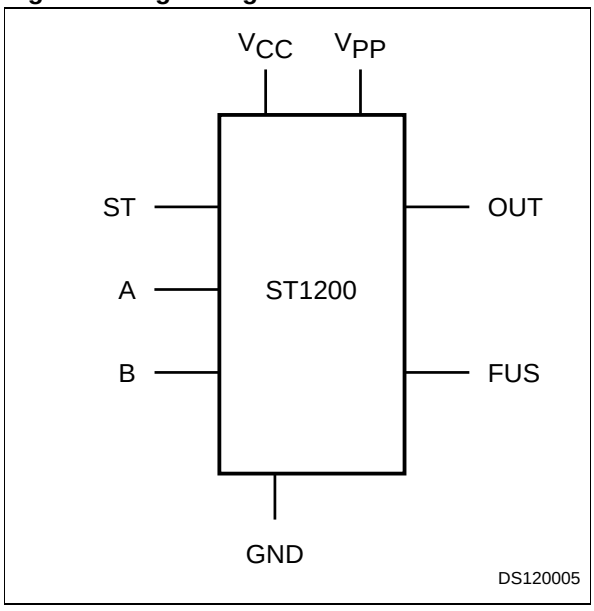
The security mechanism, called Lock-Out, allows the user to inhibit, in write mode, the access to a memory section of 96 bits. Thus, by blowing a polysilicon fuse, the address bits 0 to 95 can be protected against write.

The 9th bit of the ST1200 is set to a logical "1" for device identification purposes. In order to avoid any modification, ST has mask-programmed this bit to the logic "1" state.

Table 1. Signal Names

A	Function code
B	Function code
FUS	Fuse control
OUT	Data Output
ST	Strobe input - validates function codes - in programming mode used as a programming pulse
V_{PP}	Programming voltage (must be preset before programming and held after)
V_{CC}	Power
GND	Ground

Figure 1. Logic Diagram



The ST1200 is available in wafer form (either sawn or unsawn) and in micromodule form (on film).

For deliveries in wafer form, the memory content is at logical “0”, except for the 9th bit (bit 8).

If the delivery is in micromodule, the first bit (bit 0) has been programmed at “1” for final test control.

FUNCTIONAL DESCRIPTION

The ST1200 has 3 operating modes in the normal system environment. They are selected with the A and B inputs, as shown in Table 2.

Power-On Reset

Because of the “power-on reset” feature, the ST1200 is ready for operation (with the counter reset) after “t_{RST}”. (t_{RST} is the time for the output to become available, after the establishment of a valid level on V_{CC}). The ST1200 starts by presenting the current cell (address 0) to the OUT pin.

Figure 2. Memory Map

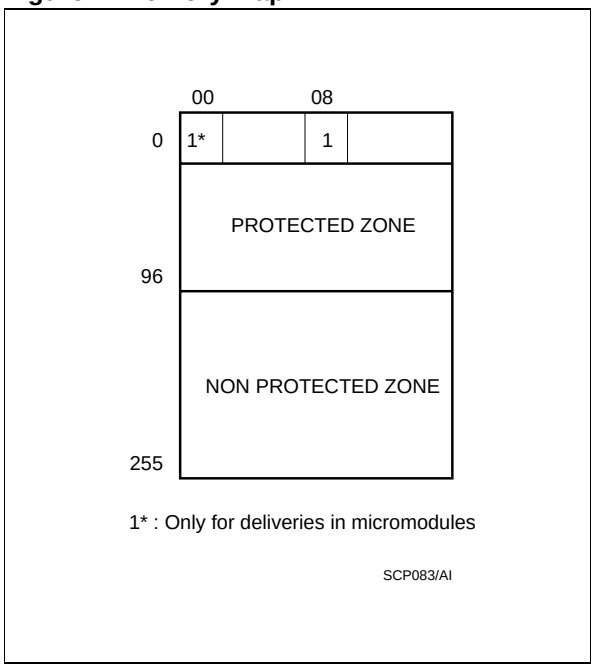


Table 2. Operating Modes

A	B	Mode
0	0	Reset address counter
0	1	Increment address counter
1	1	Program memory cell
1	0	Forbidden

Table 3. Ordering Information Scheme

Example: ST1200 - D10

Delivery Form	
D10	Micromodule on Super 35 mm reel
B5	Wafer (280 µm thickness)

Devices are shipped from the factory with the memory content set at all ‘0’s (00h).

For a list of available options (speed, package, etc...) or for further information on any aspect of this device, please contact the ST Sales Office nearest to you.