



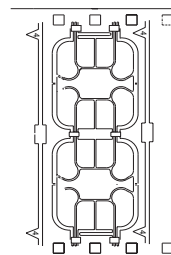
## ST19SF02

Smartcard MCU

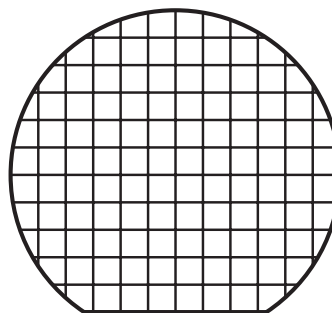
With 2 KBytes of EEPROM

DATA BRIEFING

- ENHANCED 8 BIT CPU WITH EXTENDED ADDRESSING MODES
- 32 K BYTES OF USER ROM WITH PARTITIONING
- SYSTEM ROM
- 960 BYTES OF USER RAM WITH PARTITIONING
- 2 K BYTES OF USER EEPROM WITH PARTITIONING
  - Highly reliable CMOS EEPROM submicron technology
  - 10 years data retention
  - 100,000 Erase/Write cycles endurance
  - Separate Write and Erase cycles for fast "1" programming
  - 1 to 32 bytes Erase or Program
- SECURITY FIREWALLS FOR MEMORIES
- VERY HIGH SECURITY FEATURES INCLUDING EEPROM FLASH PROGRAM
- 8 BIT TIMER WITH INTERRUPT CAPABILITY
- 2 SERIAL ACCESS, ISO 7816-3 COMPATIBLE
- $3V \pm 10\%$  or  $5V \pm 10\%$  SUPPLY VOLTAGE
- POWER SAVING STANDBY MODE
- CONTACT ASSIGNMENT COMPATIBLE ISO 7816-2
- ESD PROTECTION GREATER THAN 5000V



Micromodule (D4)



Wafer

**HARDWARE DESCRIPTION**

The ST19SF02, a member of the ST19 device family, is a serial access microcontroller especially designed for very large volume and cost competitive secure portable objects.

The ST19SF02 is based on a STMicroelectronics 8 bit CPU core including on-chip memories: 960 Bytes of RAM, 32 K Bytes of USER ROM and 2 K Bytes of EEPROM.

RAM, ROM and EEPROM memories can be configured into partitions. Access rules from any memory partition to another partition are setup by the user defined Memory Access Control Logic.

It is manufactured using the highly reliable ST technology.

As all other ST19 family members, it is fully compatible with the ISO standards for Smartcard applications.

**SOFTWARE DESCRIPTION**

Software development and firmware (ROM code/options) generation are completed by the ST16-19 HDSE development system.

**Figure 1. Block diagram**

