



ST16R820

Smartcard MCU

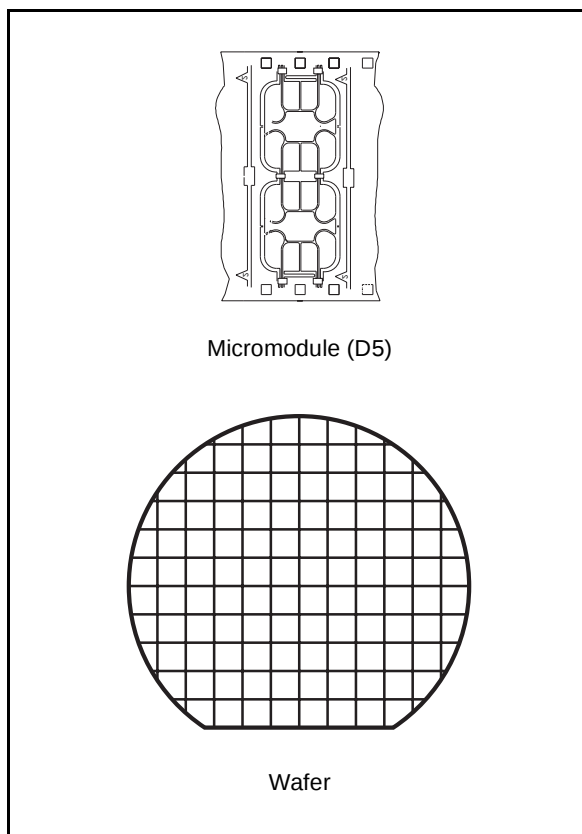
With 544 Bytes EEPROM for Contactless/Contact Applications

DATA BRIEFING

- 8 BIT ARCHITECTURE CPU
- 8 KBytes of USER ROM, SECTOR COMBINATIVE
- 4.5 KBytes of SYSTEM ROM
- 192 Bytes of RAM
- 544 Bytes of EEPROM, SECTOR COMBINATIVE
 - Highly reliable CMOS EEPROM technology
 - 10 year data retention
 - 300,000 Erase/Write cycle endurance
 - Protected One Time Programmable block (32 or 64 bytes)
 - 1 to 32 bytes block either Erase or Write in single cycle programming
- POWER SAVING STANDBY MODE
- VERY HIGH SECURITY FEATURES INCLUDING EEPROM FLASH ERASE
- ESD PROTECTION GREATER THAN 5000V
- 2 OPERATING CONFIGURATIONS
 - ISSUER
 - USER

CONTACTLESS SPECIFIC FEATURES

- 13.56 MHZ OPERATION
- 106 KBIT/S DATA TRANSFER
- AMPLITUDE MODULATION READER TO CARD
- LOAD MODULATION CARD TO READER
- 3V OPERATION



CONTACT SPECIFIC FEATURES

- EXTENDED VOLTAGE OPERATION, V_{cc} Range: 2.7V to 5.5V
- SERIAL ACCESS, ISO 7816-3 COMPATIBLE
- UP TO 5 MHz INTERNAL OPERATING FREQUENCY
- CONTACT ASSIGNMENT COMPATIBLE ISO 7816-2

The ST16R820 is based on 8 bit CPU core and includes on chip memories: 192 Bytes of RAM, 8 KBytes of USER ROM, 4.5 KBytes of SYSTEM ROM, and 544 Bytes of EEPROM.

memory section or sector to any other are set-up by the User's defined Memory Access Control Matrix (MACM).

Contact operation is fully compatible with the ISO standards for Smartcard applications.