



M35101

Contactless Memory Card IC 13.56 MHz, 2048-bit High Endurance EEPROM

DATA BRIEFING

- ISO 14443 - 2 Compliant
- 13.56 MHz Carrier Frequency
- 847 kHz Subcarrier Frequency
- 106 Kbit/second Data Transfer
- Data Modulation:
 - ASK from Reader to Card
 - BPSK from Card to Reader
- Internal Tuning Capacitor
- 2048-bit EEPROM with Write Protect Feature
- BYTE and PAGE READ (up to 16 Bytes)
- BYTE and PAGE WRITE (up to 16 Bytes)
- Self-Timed Programming Cycle with Auto-Erase
- 1 Million Erase/Write Cycles (minimum)
- 40 Year Data Retention (minimum)
- 5 ms Programming Time (typical)

DESCRIPTION

The M35101 is a contactless memory, powered by the received carrier radio wave. It is a 2048-bit EEPROM fabricated in the STMicroelectronics Single Polysilicon CMOS technology.

The memory is organised as 16 pages of 16 x 8 bits.

The M35101 conforms to the ISO 14443 (part 2) Type-B recommendation for the transfer of power and signals via radio transmission. The card reader circuitry amplitude modulates (10% modulation) the data on the carrier using amplitude shift keying (ASK). The card replies by load modulating the data on the carrier using bit phase shift keying (BPSK) of the subcarrier. The data transfer rate in each direction is 106 Kbit/second.

Table 1. Signal Names

AC1	Antenna Coil
AC0	Antenna Coil

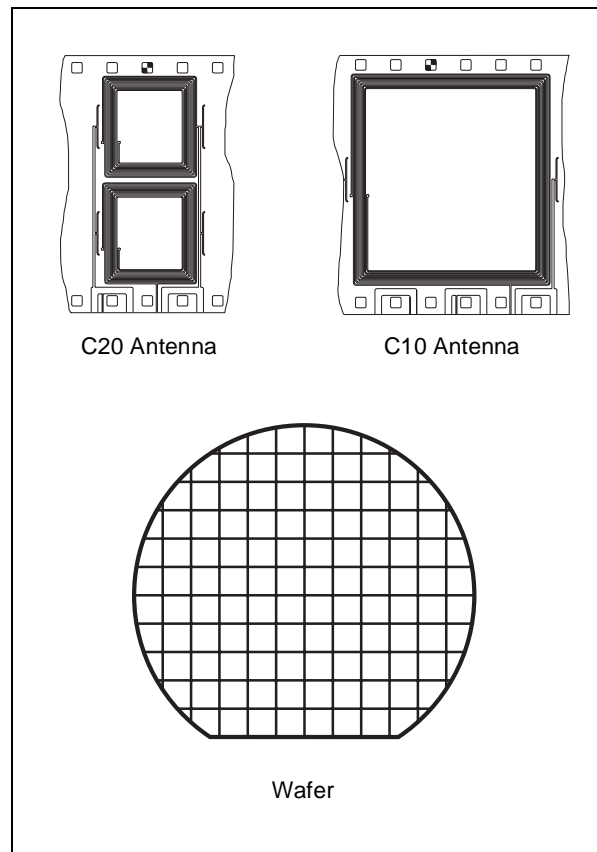


Figure 1. Logic Diagram

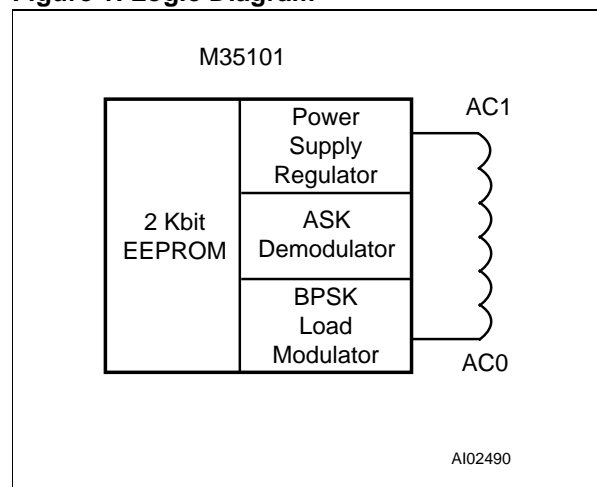


Table 2. Ordering Information Scheme

Example:

M35101 - KW4

Delivery Form	
KW4	180 μm \pm 15 μm unsawn wafer
KS4	180 μm \pm 15 μm sawn wafer
C10	Antenna on Super 35 mm tape
C20	Antenna on Super 35 mm tape

Devices are shipped from the factory with the memory content set at all '1's (FFh).

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.