



ST1353 ST1355

Memory Card IC 272 bit High Endurance EEPROM With Cipher Block Chaining (CBC) Security Mechanism

DATA BRIEFING

- 5 V Single Supply Voltage
- Memory Divided into:
 - 16 bits of Chip Identification
 - 48 bits of Card Identification
 - 40 bits of Count Data
 - 16 bits for Validation Certificate
 - 24 bits of Transport Code
 - 64 bits of Authentication Secret Key
 - 32 bits of Anti-tearing Flags (option)
 - 56 bits of User Data (option: not erasable)
- Counting Capability (two options)
 - up to 32767 ($8^5 - 1$)
 - 8 times reloadable, up to 4095 ($8^4 - 1$)
- Certificate for Card Validation
- Advanced Authentication Function with CBC
- Special Anti-Tearing Mechanism
- Circuit Protected by Transport Code for Delivery from ST to the Customer
- Reset on V_{CC} High and Low
- Choice of Two Communication Protocols:
 - 6 contacts for ST1353
 - 5 contacts for ST1355
- 4000V E.S.D. Protection (minimum)
- 1 Million Erase/Write Cycle (minimum)
- 10 Year Data Retention (minimum)
- 5 ms Programming Time (maximum)

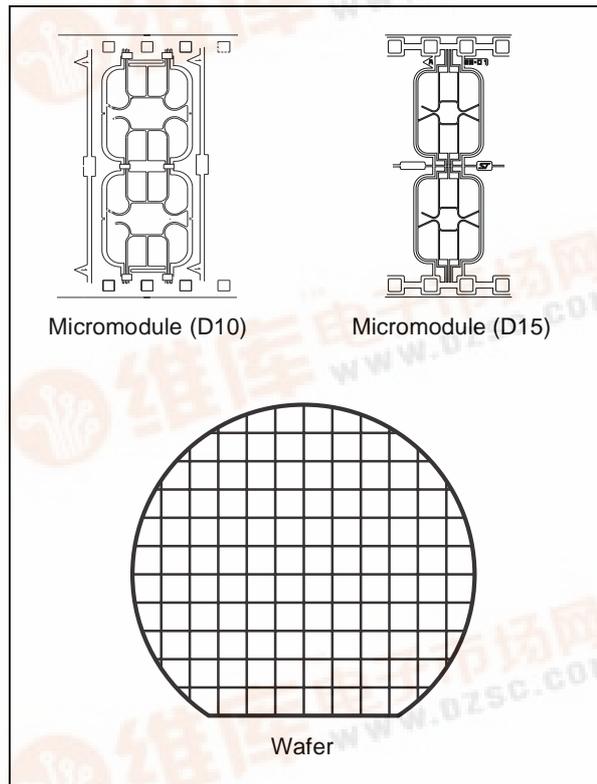


Figure 1. Logic Diagram

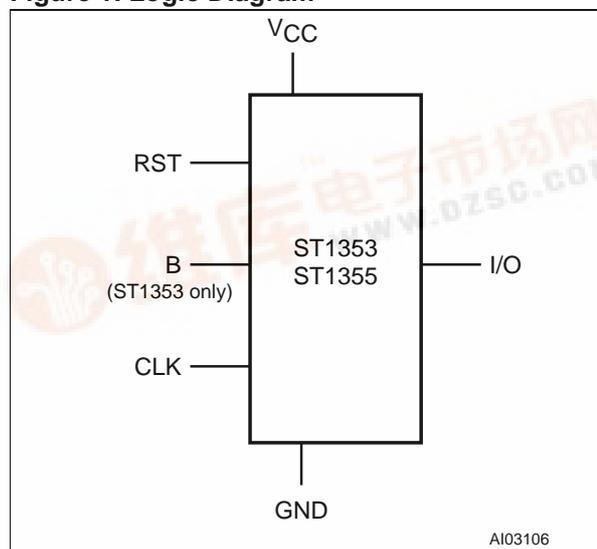


Table 1. Signal Names

CLK	Clock
RST	Function code for ST1353
	Reset for ST1355
B	Function Code for ST1353
I/O	Data Input / Output
V _{CC}	Supply Voltage
GND	Ground



ST1353, ST1355

Figure 2. D10 Connections

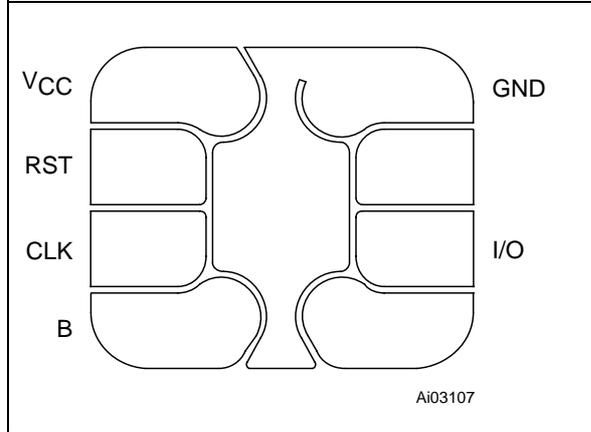


Figure 3. D15 Connections

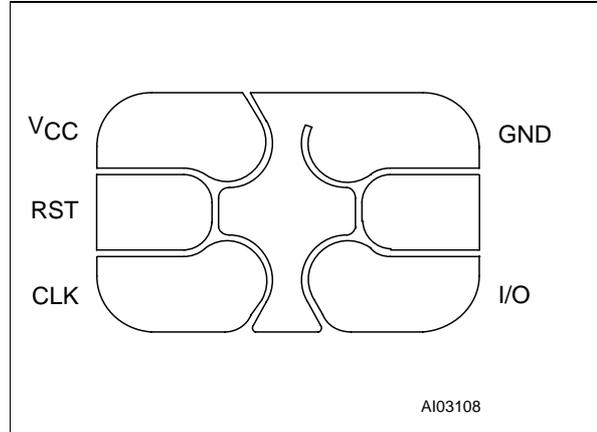


Table 2. ST135x Family Products

Product	Advanced Authentication function with CBC	Communication Protocol	
		6 contacts	5 contacts
ST1353	Yes	Yes	
ST1355	Yes		Yes

ORDERING INFORMATION SCHEME

The notation used for the device number is as shown in Table 3. 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.

Table 3. Ordering Information Scheme

Example:	ST1353	-	W4	/	XX	YY
	Protocol					Transport Code
53	6-contact, with advanced authentication function					Given by ST
55	5-contact, with advanced authentication function					
	Delivery Form					Customer Code
D10	Micromodule on Super 35 mm reel (ST1353 only)					Given by the Issuer
D15	Micromodule on Super 35 mm reel (ST1355 only)					
W4	Wafer (180 μm thickness)					