AN626
Application note

Serial EEPROM product numbering

Introduction

The AN626 provides a detailed description of the part numbering scheme of Serial EEPROM products.

The part numbering scheme consists of a maximum of 13 digits grouped in nine fields (A to H) as shown in *Table 1*.

Fields A to C represent the product identifiers and fields D to H the product options. The “-” character is used to separate the identifiers from the options.

Table 1. Serial EEPROM part numbering scheme

Digit	Field	Use
1st	A	Product line (“M” = memory)
2nd	B	Device type (Product family)
3rd		
4th	C	Device function (Memory capacity)
5th		
6th		
6 bis	-	For WLCSP with Device Select Code
7th	-	Dash, to separate the product number identifiers from the product option designators
8th	D	For device with Lockable ID page
9th	E	Operating range (V_{CC})
10th	F	Package type
11th		
12th	G	Device grade (temperature range)
13th	H	Option
14th	I	Plating technology
15th	/J	Die process

An additional “/” followed by two digits are used by ST to aid traceability, and might appear on some documents at the bottom of the Ordering information scheme table under “Process” field. This information offers the die and technology references (for temperature range 3 devices) and can be ignored for temperature range 6 devices.

Table 2. Field A, 1st character, product line

Product line code	Product line type
M	Memory

Table 3. Field B, 2nd and 3rd characters, product family

Family code	Memory type	Family
93	Non-volatile memory	MICROWIRE
24		I^2C
95		SPI
33	Application-specific memory Non-volatile memory	MICROWIRE
34		I^2C
35		SPI

Table 4. Field C, 4th, 5th and 6th characters, memory capacity

Capacity	Microwire (M93)	I²C (M24)	SPI (M95)
1 Kb	C46 and S46(1)	C01	010
2 Kb	C56 and S56(1)	C02	020
4 Kb	C66 and S66(1)	C04	040
8 Kb	C76	C08	080
16 Kb	C86	C16	160
32 Kb	-	C32	320
64 Kb	-	C64	640
128 Kb	-	128-B	128
256 Kb	-	256-B	256
512 Kb	-	512	512
1 Mb	-	M01	M01
2 Mb	-	M02	M02

1. with block protection

Table 5. Field D, 8th character, V_{CC} range

Voltage range code	Memory	Voltage range
Blank	Serial EEPROMs	4.5 V to 5.5 V
W		2.5 V to 5.5 V
R		1.8 V to 5.5 V
F		1.7 V to 5.5 V
X		1.6 V to 5.5 V

Table 6. Field E, 9th and 10th characters, package (two letters used in every case)

Package code	Package type
BN	PDIP8 standard
CS	WLCSP (Chip scale package)
CT	Thin WLCSP (Chip scale package)
CU	Ultra -Thin WLCSP (Chip Scale Package)
DW	TSSOP8
MN	SO8 narrow 0.150 mils
MC	UFDFPN8 (MLP8)
MF	WFDFPN8 (MLP8)
MH	UFDFPN5 (MLP5)

Table 7. Field F, 11th character, temperature range

Device grade	Temperature range
1	0 °C to 70 °C
3	–40 °C to +125 °C, with a certified reliability flow tailored for automotive applications
6	–40 °C to +85 °C
8	–40 °C to +105 °C
9	0 °C to +95 °C

Table 8. Field G, 12th, packing option

Option code	Option
Blank	Tube packing
T	Tape and reel packing

Table 9. Field H, 13th, plating technology

Code	Plating technology
P or G	ECOPACK® (RoHS compliant)
TF	Back side coating (for WLCSP packages)

Table 10. Field J, 14th, die process

Code	Plating technology
G or S	F6SP
B or P	F6DP
A	F8L
K	F8H
T	F8H+

For complete details of the correct product number, and ordering codes, for a specific product, please contact your nearest ST sales office or distributor.

Revision history

Table 11. Document revision history

Date	Revision	Changes
June-1998	1.0	First Issue.
22-Nov-2004	2.0	15th digit concerning Plating option added in *Table 1: Serial EEPROM part numbering scheme*. Tables *3*, *5*, *5*, *6* updated and *Table 9: Field H, 13th, plating technology* added.
25-Apr-2008	3	Document reformatted. All tables updated.
19-Jul-2010	4	*Table 1: Serial EEPROM part numbering scheme*, *Table 4: Field C, 4th, 5th and 6th characters, memory capacity*, and *Table 6: Field E, 9th and 10th characters, package (two letters used in every case)* updated. *Table 10: Field J, 14th, die process* added.
15-Jul-2013	5	Added Voltage range code 'X' in *Table 5: Field D, 8th character, VCC range* Updated packaged codes list in *Table 6: Field E, 9th and 10th characters, package (two letters used in every case)*. Added die process code 'T' in *Table 10: Field J, 14th, die process*.
17-Feb-2015	6	Added package code CU in *Table 6: Field E, 9th and 10th characters, package (two letters used in every case)*. Added temperature range 8 in *Table 7: Field F, 11th character, temperature range*. Added plating technology TF in *Table 9: Field H, 13th, plating technology*.
02-Mar-2016	7	Updated: *Table 1*, *Table 4*, *Table 6*, *Table 7*, *Table 8* and *Table 10*