



## EEPROM Product Numbering

The product numbering strategy, on ST EEPROM parts, has been rationalized. Previously, the numbering strategy had had to cater many different ranges of products, when the separate groups were united to form the company. The new numbering strategy is being adopted on all forthcoming products, ranges and families, and will remain constant for the foreseeable future.

The new product numbering scheme is being introduced gradually, with no immediate effect on existing orders. Product numbers are being changed only when a device upgrade is made (such as a die shrink) or when a new product is introduced. (All major product changes are announced with a Product Change Notice.)

The new product numbers consist of a 14 digit ordering code (e.g. M28256-12WKA6T), grouped into eight fields (A to H) as shown in Table 1.

**Table 1.**

Digit	Field	Use
1st	A	Product line ("M" = memory)
2nd	B	Product family
3rd		
4th	C	Memory capacity
5th		
6th		
7th	-	Dash, to separate the product number identifiers from the product option designators
8th	D	Operating speed or product options
9th		
10th	E	V <sub>CC</sub> range
11th	F	Package type
12th		
13th	G	Temperature range
14th	H	Tape and reel packaging

An additional solidus, "/", and two digits are used by ST to aid traceability, and might appear on some documents. These can be ignored as far as the product type and specification are concerned.

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The “ST” at the start of the product number, to indicate SGS-THOMSON Microelectronics, is now being phased out.

**Table 2. Field A, 1st character, Product line**

M	Memory
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**Table 3. Field B, 2nd and 3rd characters, Product family**

93	Non-Volatile Memory	MICROWIRE ®
24		I <sup>2</sup> C™ (including XI <sup>2</sup> C)
25		SPI ≥ 1 Mb
95		SPI < 1 Mb
28		Parallel
33	Application Specific Memory	MICROWIRE
34		I <sup>2</sup> C
35		SPI
37		EPROM
38		Parallel EEPROM or Dual Voltage Flash
39		Flash+

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

C01	e.g. M24C01	1 Kb I <sup>2</sup> C serial EEPROM
C64	e.g. M24C64	64 Kb bit I <sup>2</sup> C serial EEPROM
128	e.g. M24128	128 Kb bit I <sup>2</sup> C serial EEPROM
etc.		
010	e.g. M95010	1 Kb SPI serial EEPROM
640	e.g. M95640	64 Kb SPI serial EEPROM
128	e.g. M95128	128 Kb SPI serial EEPROM
etc.		

The “-” character is used to separate the product identifiers from the product options.

**Table 5. Field D, 8th and 9th characters (optional), Operating speed (or product options)**

30	Parallel Interface Products	300 ns
25		250 ns
20		200 ns
18		180 ns
15		150 ns
12		120 ns
10		100 ns
90		90 ns
etc.		That is, for speeds less than 100 ns, the actual value is used
xx	Serial and Application Specific Memories	Maximum of two characters describing specific product options

**Table 6. Field E, 10th character, V<sub>CC</sub> range**

“blank”	Serial devices	4.5 V to 5.5 V
V		3.0 V to 5.5 V
W		2.5 V to 5.5 V
R		1.8 V to 3.6 V
“blank”	Parallel devices	4.5 V to 5.5 V
W		2.7 V to 3.6 V

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**Table 7. Field F, 11th and 12th characters, Package (two letters used in every case)**

BN	PSDIP8 standard
BG	PDIP24 standard
BS	PDIP28 standard
KA	PLCC32 standard
NS	TSOP28 standard
NC	TSOP40 standard
DW	TSSOP8
DL	TSSOP14
MN	SO8 narrow 0.150 mils
MW	SO8 wide 0.200 mils
ML	SO14
MJ	SO14 wide
MS	SO28
MG	SO24

**Table 8. Field G, 13th character, Temperature range**

1	0 °C to 70 °C
3	-40 °C to +125 °C, with a certified reliability flow tailored for the automotive industry
5	-20 °C to +85 °C
6	-40 °C to +85 °C

**Table 9. Field H, 14th character, Tape and Reel packaging**

"blank"	Discrete packaging
T	Tape and Reel packaging

For complete details of the correct product number, and ordering codes, for a specific product, please contact your nearest ST sales office or distributor, or the technical support centre at the electronic mail address given on the next page.

If you have any questions or suggestions concerning the matters raised in this document, please send them to the following electronic mail address:

*apps.eeprom@st.com*

Please remember to include your name, company, location, telephone number and fax number.

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