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## Certificate of Compliance

July 27<sup>th</sup> , 2020

To Whom It May Concern: MICRON LEGACY Fab-13 NOR FLASH

I hereby certify that Alliance Memory has signed a special agreement with MICRON to continue to supply previously EOL Micron NOR Flash Products. Initial engagement is across various MPNs within the following device families:

Device Family Type		Initial Densities
<b>M29Fxxx</b>	5V Parallel NOR Flash	4Mb, 8Mb and 16Mb
<b>M45PExxx</b>	Serial NOR Flash	2Mb, 8Mb and 16Mb
<b>N25Qxxx</b>	Serial NOR Flash	32M and 64Mb

All parts are genuine Micron built parts and are in original Micron packaging

All products will keep the Micron (STM, Numonyx, Intel) part markings as outlined in the following Micron Technical Note TN-12-24: Serial Flash Memory Device Marking for the M25P, M25PE, M45PE, M25PX and N25Q Product families,

A handwritten signature in black ink that reads 'David Bagby'.

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ISO 9001-2008 Registered



# Technical Note

## Serial Flash Memory Device Marking for the M25P, M25PE, M45PE, M25PX, and N25Q Product Families

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### Introduction

This document explains the part marking fields for each type of package used for embedded SPI Flash memory devices and lists the marketing part numbers for each of those packages.

This technical note replaces TN-12-02.



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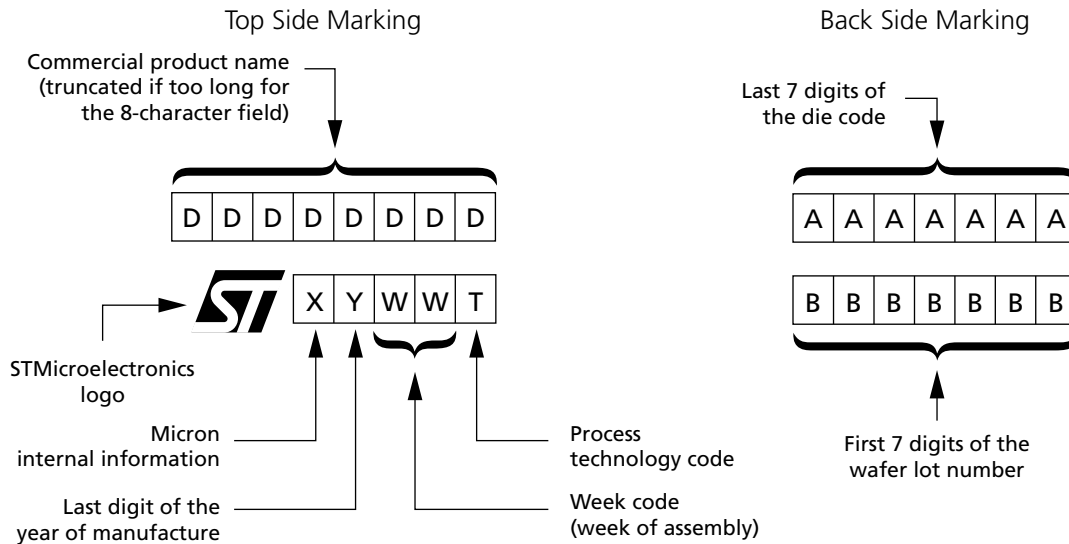
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## Part Marks for M25P/PE/PX and M45PE Product Families

The following product marks are for the M25P, M25PE, M25PX, and M45PE product families' packages.

**Figure 1: SO8N Component Marks, Package Option: MN**



The SO8N (SOP2-8/150 mil) package is an 8-pin, narrow SOIC. The part number option code is MN.

**Table 1: SO8N (MN) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8-Digit)	Technology Code	Litho	Temperature Grade	Type
M25P	512K	M25P05-AVMN6P or TP	25P05VP	Y	150nm	-40 to 85°C	Industrial
M25P	1Mb	M25P10-AVMN6P or TP	25P10VP	Y	150nm	-40 to 85°C	Industrial
M25P	1Mb	M25P10-AVMN3TP/Y	25P10VPA	Y	150nm	-40 to 125°C	Auto
M25P	1Mb	M25P10-AVMN6TPYA	25P10VPA	Y	150nm	-40 to 85°C	Auto
M25PE	1Mb	M25PE10-VMN6P or TP	25PE10VP	4	110nm	-40 to 85°C	Industrial
M25PE	1Mb	M25PE10-VMN3PB or TP	25PE10VP	A	110nm	-40 to 125°C	Auto
M25PE	1Mb	M25PE10-VMN6PBA or TPBA	25PE10VP	A	110nm	-40 to 85°C	Auto
M45PE	1Mb	M45PE10-VMN6P or TP	45PE10VP	4	110nm	-40 to 85°C	Industrial
M25P	2Mb	M25P20-VMN6PB or TP	25P20VP	4	110nm	-40 to 85°C	Industrial
M25P	2Mb	M25P20-VMN3PB or TP	25P20VPA	4	110nm	-40 to 125°C	Auto
M25P	2Mb	M25P20-VMN6TPBA	25P20VPA	4	110nm	-40 to 85°C	Auto
M25PE	2Mb	M25PE20-VMN6P or TP	25PE20VP	4	110nm	-40 to 85°C	Industrial
M25PE	2Mb	M25PE20-VMN6TPBA	25PE20VP	A	110nm	-40 to 85°C	Auto
M45PE	2Mb	M45PE20-VMN6P or TP	45PE20VP	4	110nm	-40 to 85°C	Industrial
M25P	4Mb	M25P40-VMN6PB or TP	25P40VP	4	110nm	-40 to 85°C	Industrial

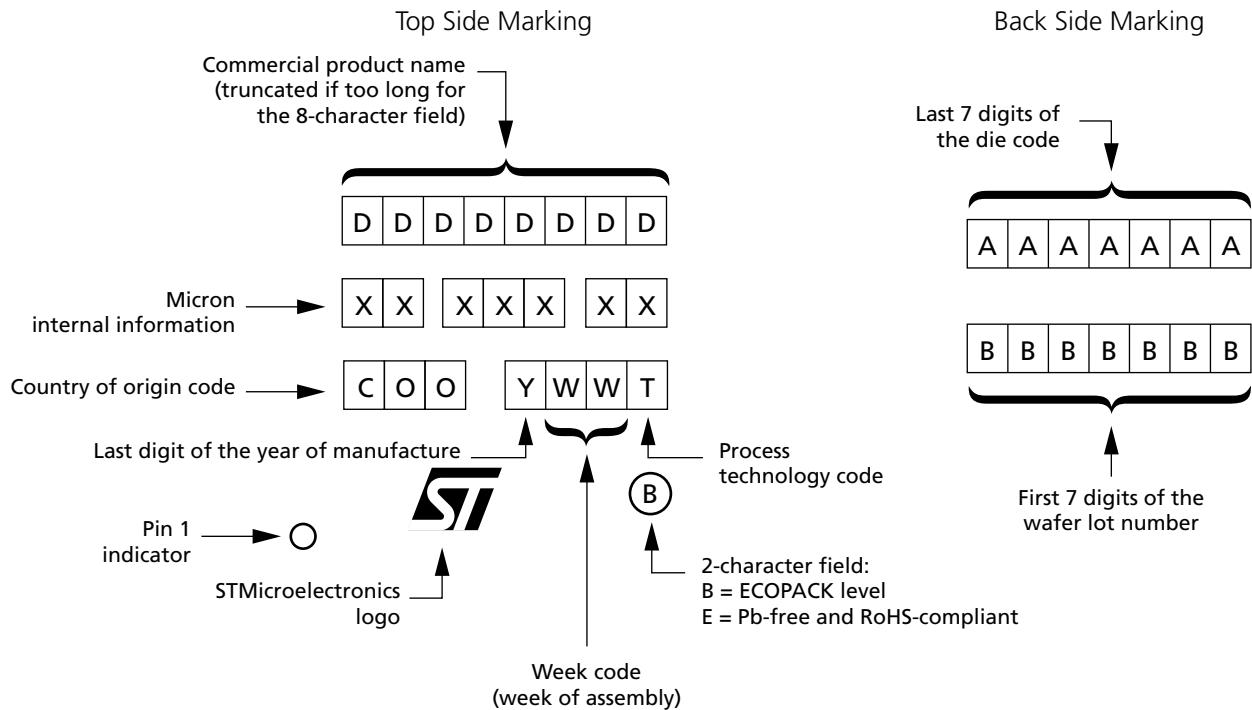


## TN-12-24: Serial Flash Product Marks Part Marks for M25P/PE/PX and M45PE Product Families

**Table 1: SO8N (MN) Marketing Part Numbers (Continued)**

Family	Density	Marketing Part Number	Marking (8-Digit)	Technology Code	Litho	Temperature Grade	Type
M25P	4Mb	M25P40-VMN3PB or TP	25P40VPA	4	110nm	-40 to 125°C	Auto
M25P	4Mb	M25P40-VMN6PBA or TP	25P40VPA	4	110nm	-40 to 85°C	Auto
M25PE	4Mb	M25PE40-VMN6P or TP	25PE40VP	4	110nm	-40 to 85°C	Industrial
M25PE	4Mb	M25PE40-VMN6TPBA	25PE40VP	A	110nm	-40 to 85°C	Auto
M45PE	4Mb	M45PE40-VMN6P or TP	45PE40VP	4	110nm	-40 to 85°C	Industrial
M25P	8Mb	M25P80-VMN6P or TP	25P80VP	4	110nm	-40 to 85°C	Industrial
M25P	8Mb	M25P80-VMN3PB or TP	25P80VPA	4	110nm	-40 to 125°C	Auto
M25P	8Mb	M25P80-VMN6PBA or TP	25P80VPA	4	110nm	-40 to 85°C	Auto
M25PE	8Mb	M25PE80-VMN6P or TP	25PE80VP	4	110nm	-40 to 85°C	Industrial
M25PE	8Mb	M25PE80-VMN6TPBA	25PE80VP	A	110nm	-40 to 85°C	Auto
M45PE	8Mb	M45PE80-VMN6P or TP	45PE80VP	4	110nm	-40 to 85°C	Industrial
M25PX	8Mb	M25PX80-VMN6P or TP	25PX80VP	4	110nm	-40 to 85°C	Industrial
M25PX	8Mb	M25PX80-VMN6TPBA	25PX80VA	4	110nm	-40 to 85°C	Auto
M25P	16Mb	M25P16-VMN6P or TP	25P16VP	4	110nm	-40 to 85°C	Industrial
M25P	16Mb	M25P16-VMN3PB or TP or YP	25P16VPA	4	110nm	-40 to 125°C	Auto
M25P	16Mb	M25P16-VMN6PBA or TP or YP	25P16VPA	4	110nm	-40 to 85°C	Auto
M25PX	16Mb	M25PX16-VMN6P or TP	25PX16VP	4	110nm	-40 to 85°C	Industrial
M25PX	16Mb	M25PX16-VMN6TPBA	25PX16VP	4	110nm	-40 to 85°C	Auto

**Figure 2: SO8W Component Marks, Package Option: MW**



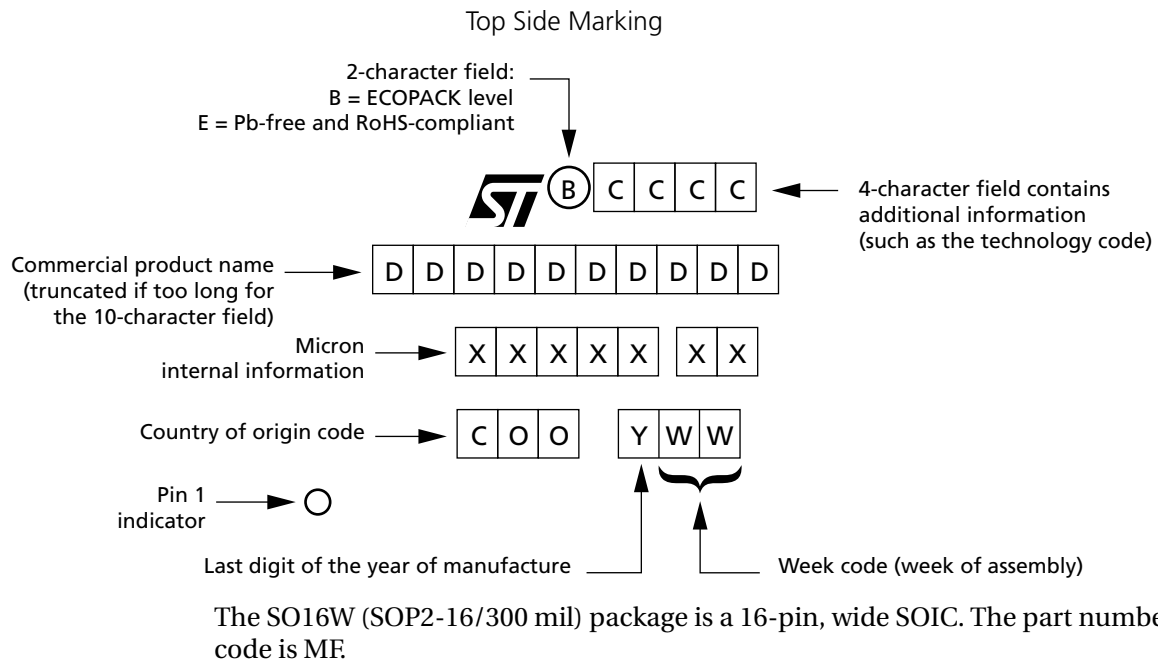
The SO8W (SOP2-8/208 mil) package is an 8-pin, wide SOIC. The part number option code is MW.

**Table 2: SO8W (MW) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8-Digit)	Technology Code	Litho	Temperature Grade	Type
M25PE	4Mb	M25PE40-VMW6G or TG	25PE40VG	4	110nm	-40 to 85°C	Industrial
M45PE	4Mb	M45PE40-VMW6G or TG	45PE40VG	4	110nm	-40 to 85°C	Industrial
M25P	8Mb	M25P80-VMW6G or TG	25P80VG	4	110nm	-40 to 85°C	Industrial
M25P	8Mb	M25P80-VMW6TGBA	25P80VAG	4	110nm	-40 to 85°C	Auto
M25PE	8Mb	M25PE80-VMW6G or TG	25PE80VG	4	110nm	-40 to 85°C	Industrial
M45PE	8Mb	M45PE80-VMW6G or TG	45PE80VG	4	110nm	-40 to 85°C	Industrial
M25PX	8Mb	M25PX80-VMW6G or TG	25PX80VG	4	110nm	-40 to 85°C	Industrial
M25P	16Mb	M25P16-VMW6G or TG	25P16VG	4	110nm	-40 to 85°C	Industrial
M25PE	16Mb	M25PE16-VMW6G or TG	25PE16VG	4	110nm	-40 to 85°C	Industrial
M45PE	16Mb	M45PE16-VMW6G or TG	45PE16VG	4	110nm	-40 to 85°C	Industrial
M25PX	16Mb	M25PX16-VMW6G or TG	25PX16VG	4	110nm	-40 to 85°C	Industrial
M25P	32Mb	M25P32-VMW6G or TG	25P32V6G	4	110nm	-40 to 85°C	Industrial
M25P	32Mb	M25P32-VMW3TGB	25P32VAG	4	110nm	-40 to 125°C	Auto
M25P	32Mb	M25P32-VMW6TGBA	25P32VAG	4	110nm	-40 to 85°C	Auto
M25PX	32Mb	M25PX32-VMW6E or F	25PX32VE	4	110nm	-40 to 85°C	Industrial



**Figure 3: SO16W Component Marks, Package Option: MF**

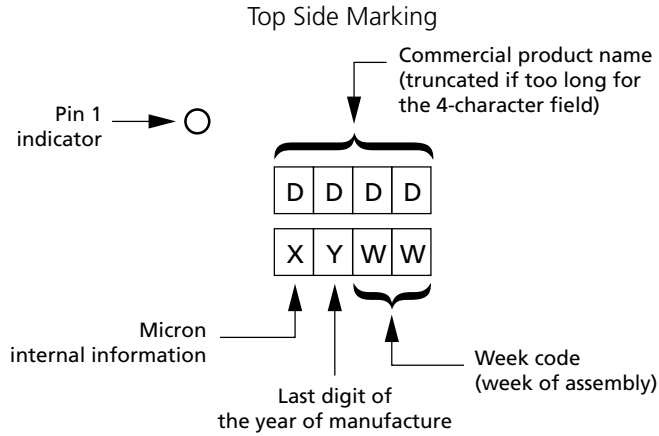


**Table 3: SO16W (MF) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (10-Digit)	Technology Code	Litho	Temperature Grade	Type
M25P	16Mb	M25P16-VMF3PB or TP	25P16V6PA	4	110nm	-40 to 125°C	Auto
M25P	16Mb	M25P16-VMF6P or TP	25P16V6P	4	110nm	-40 to 85°C	Industrial
M25P	16Mb	M25P16-VMF6PBA	25P16V6PA	4	110nm	-40 to 85°C	Auto
M25P	32Mb	M25P32-VMF3TPB	25P32V6PA	4	110nm	-40 to 125°C	Auto
M25P	32Mb	M25P32-VMF6P or TP	25P32V6P	4	110nm	-40 to 85°C	Industrial
M25P	64Mb	M25P64-VMF6P or TP	25P64V6P	4	110nm	-40 to 85°C	Industrial
M25P	64Mb	M25P64-VMF3TPB	25P64V6PA	4	110nm	-40 to 125°C	Auto
M25P	64Mb	M25P64-VMF6TPBA	25P64V6PA	4	110nm	-40 to 85°C	Auto
M25PX	64Mb	M25PX64-VMF6P or TP	25PX64VP	4	110nm	-40 to 85°C	Industrial
M25P	128Mb <sup>1</sup>	M25P128-VMF6PB or TP	25P28V6P	A	65nm	-40 to 85°C	Industrial

Note: 1. The part marks for the 128Mb package do not include the ST logo shown above.

**Figure 4: DFN/3x2 Component Marks, Package Option: MB**

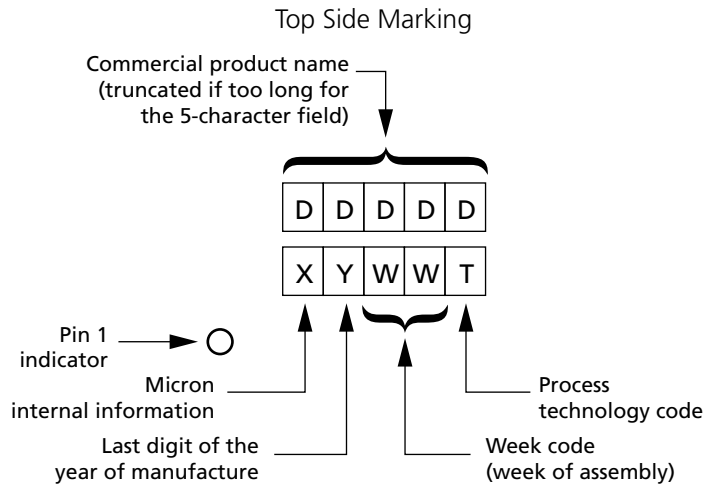


The DFN/3x2 (U-PDFN-8/3x2) package is a 3mm x 2mm, ultra thin plastic with eight terminal pads. The part number option code is MB.

**Table 4: DFN/3x2 (MB) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (4-Digit)	Litho	Temperature Grade	Type
M25P	1Mb	M25P10-AVMB6TG	P10V	150nm	-40 to 85°C	Industrial
M25P	1Mb	M25P10-AVMB3TP/Y	P10A	150nm	-40 to 125°C	Auto
M25P	4Mb	M25P40-VMB6TPB	P40V	110nm	-40 to 85°C	Industrial
M25P	4Mb	M25P40-VMB3TPB	P40A	110nm	-40 to 125°C	Auto

**Figure 5: DFN/3x4 Component Marks, Package Option: MC**

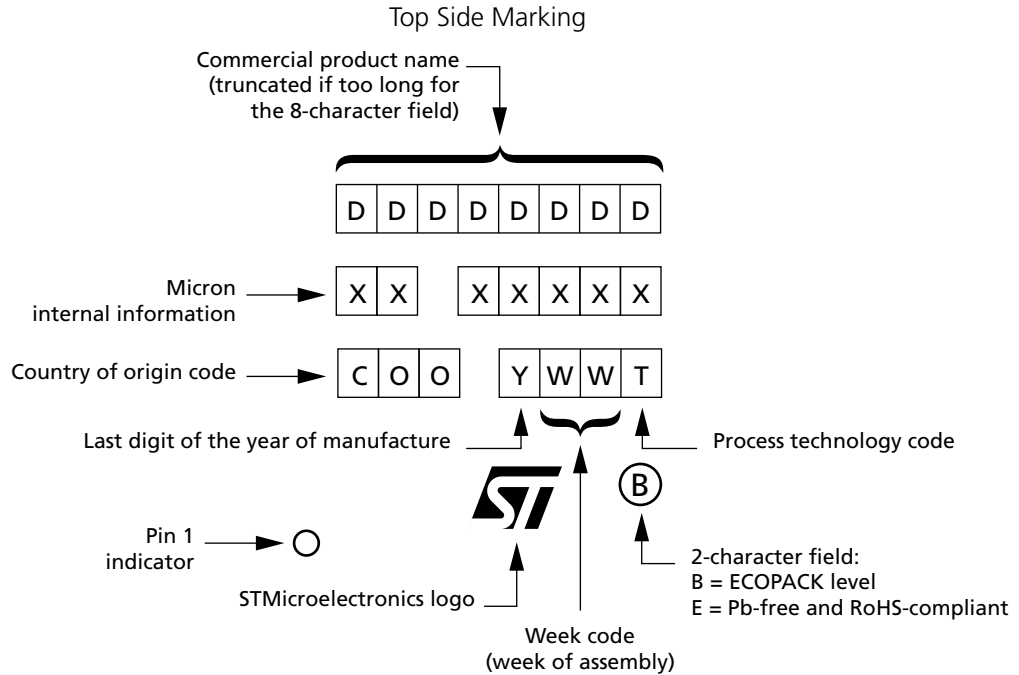


The DFN/3x4 (U-PDFN-8/3x4) package is a 3mm x 4mm, ultra thin plastic with eight terminal pads. The part number option code is MC.

**Table 5: DFN/3x4 (MC) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (5-Digit)	Technology Code	Litho	Temperature Grade	Type
M25P	4Mb	M25P40-VMC6GB or TG	25P10	4	110nm	-40 to 85°C	Industrial
M25PE	4Mb	M25PE40-VMC6G or TG	25E40	4	110nm	-40 to 85°C	Industrial
M25P	8Mb	M25P80-VMC6G or TG	25P80	4	110nm	-40 to 85°C	Industrial
M25P	16Mb	M25P16-VMC6G or TG	25P16	4	110nm	-40 to 85°C	Industrial

**Figure 6: DFN/6x5 Component Marks, Package Option: MP**



The DFN/6x5 (V-PDFN-8/6x5) package is a 6mm x 5mm, ultra thin plastic with eight terminal pads. The part number option code is MP.

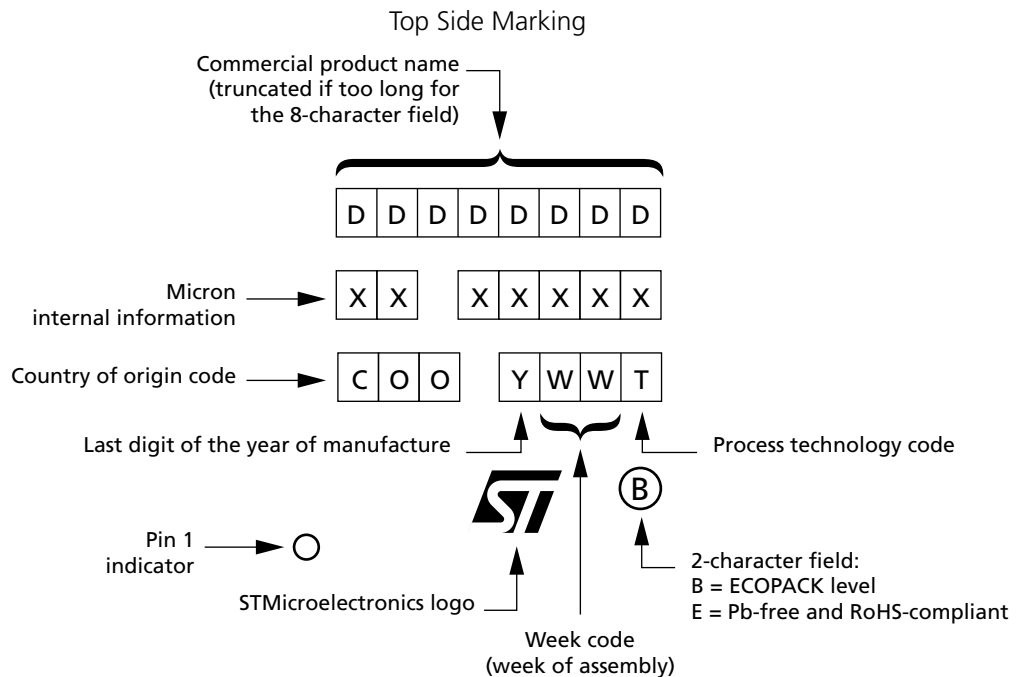
**Table 6: DFN/6x5 (MP) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8-Digit)	Technology Code	Litho	Temperature Grade	Type
M25P	512K	M25P05-AVMP6G or TG	25P05VG	Y	150nm	-40 to 85°C	Industrial
M25P	1Mb	M25P10-AVMP6G or TG	25P10VG	Y	150nm	-40 to 85°C	Industrial
M25PE	1Mb	M25PE10-VMP6G or TG	25PE10VG	4	110nm	-40 to 85°C	Industrial
M45PE	1Mb	M45PE10-VMP6G or TG	45PE10VG	4	110nm	-40 to 85°C	Industrial
M25P	2Mb	M25P20-VMP6G or TG	25P20VG	4	110nm	-40 to 85°C	Industrial
M25PE	2Mb	M25PE20-VMP6G or TG	25PE20VG	4	110nm	-40 to 85°C	Industrial
M45PE	2Mb	M45PE20-VMP6G or TG	45PE20VG	4	110nm	-40 to 85°C	Industrial
M25P	4Mb	M25P40-VMP6G or TG	25P40VG	4	110nm	-40 to 85°C	Industrial
M25PE	4Mb	M25PE40-VMP6G or TG	25PE40VG	4	110nm	-40 to 85°C	Industrial
M45PE	4Mb	M45PE40-VMP6G or TG	45PE40VG	4	110nm	-40 to 85°C	Industrial
M25P	8Mb	M25P80-VMP6G or TG	25P80V6G	4	110nm	-40 to 85°C	Industrial
M25PE	8Mb	M25PE80-VMP6G or TG	25PE80VG	4	110nm	-40 to 85°C	Industrial
M45PE	8Mb	M45PE80-VMP6G or TG	45PE80VG	4	110nm	-40 to 85°C	Industrial
M25PX	8Mb	M25PX80-VMP6G or TG	25PX80VG	4	110nm	-40 to 85°C	Industrial
M25P	16Mb	M25P16-VMP6G or TG	25P16V6G	4	110nm	-40 to 85°C	Industrial
M25PE	16Mb	M25PE16-VMP6G or TG	25PE16VG	4	110nm	-40 to 85°C	Industrial
M45PE	16Mb	M45PE16-VMP6G or TG	45PE16VG	4	110nm	-40 to 85°C	Industrial

**Table 6: DFN/6x5 (MP) Marketing Part Numbers (Continued)**

Family	Density	Marketing Part Number	Marking (8-Digit)	Technology Code	Litho	Temperature Grade	Type
M25PX	16Mb	M25PX16-VMN6G or TG	25PX16VG	4	110nm	-40 to 85°C	Industrial
M25P	32Mb	M25P32-VMP6G or TG	25P32V6G	4	110nm	-40 to 85°C	Industrial
M25PX	32Mb	M25PX32-VMP6E or F	25PX32VE	4	110nm	-40 to 85°C	Industrial
M25PX	32Mb	M25PX32-VMP6FBA	25PX32VA	4	110nm	-40 to 85°C	Auto

**Figure 7: DFN/8x6 Component Marks, Package Option: ME**



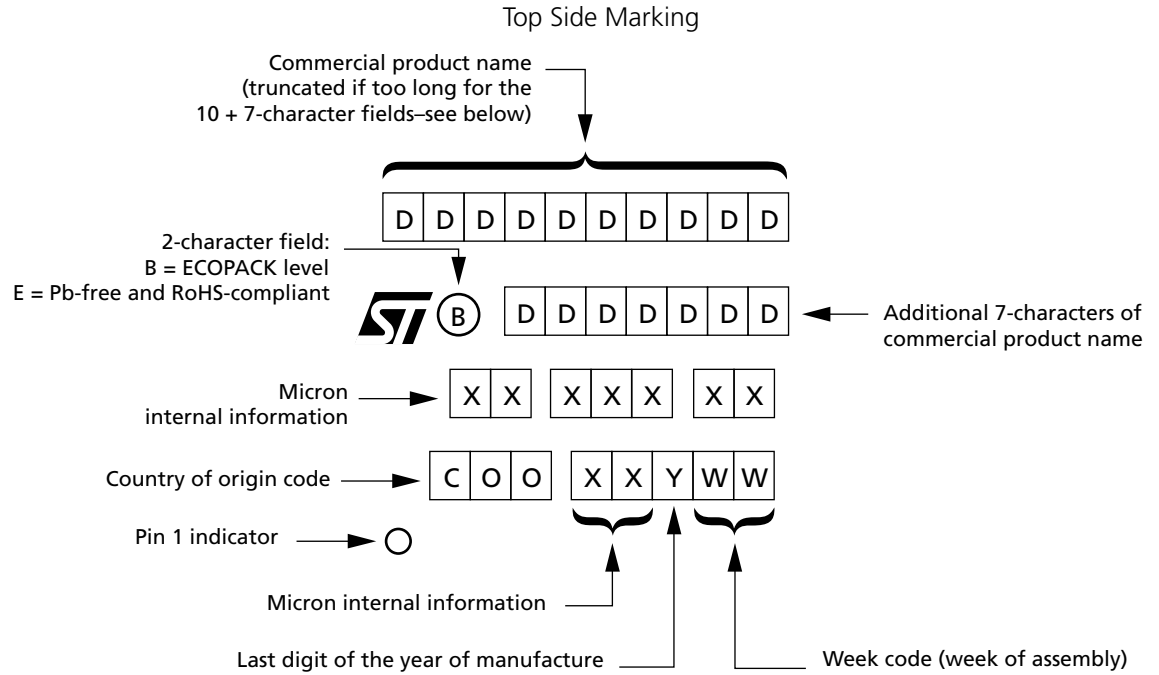
The DFN/8x6 (V-PDFN-8/8x6) package is a 8mm x 6mm, ultra thin plastic with eight terminal pads. The part number option code is ME.

**Table 7: DFN/8x6 (ME) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8-Digit)	Technology Code	Litho	Temperature Grade	Type
M25P	16Mb	M25P16-VME6G or TG	25P16V6G	4	110nm	-40 to 85°C	Industrial
M25P	32Mb	M25P32-VME6G or TG	25P32V6G	4	110nm	-40 to 85°C	Industrial
M25P	64Mb	M25P64-VME6G or TG	25P64V6G	4	110nm	-40 to 85°C	Industrial
M25PX	64Mb	M25PX64-VME6G or TG	25PX64VG	4	110nm	-40 to 85°C	Industrial
M25P	128Mb <sup>1</sup>	M25P128-VME6G or TG	25P28V6G	A	65nm	-40 to 85°C	Industrial

Note: 1. The part marks for the 128Mb package do not include the ST logo shown above.

**Figure 8: TBGA 24 Component Marks, Package Option: ZM**



The TBGA 24 (T-PBGA-24b05/6x8) package is a 6mm x 8mm, 24-ball, thin plastic ball grid array. The part number option code is ZM.

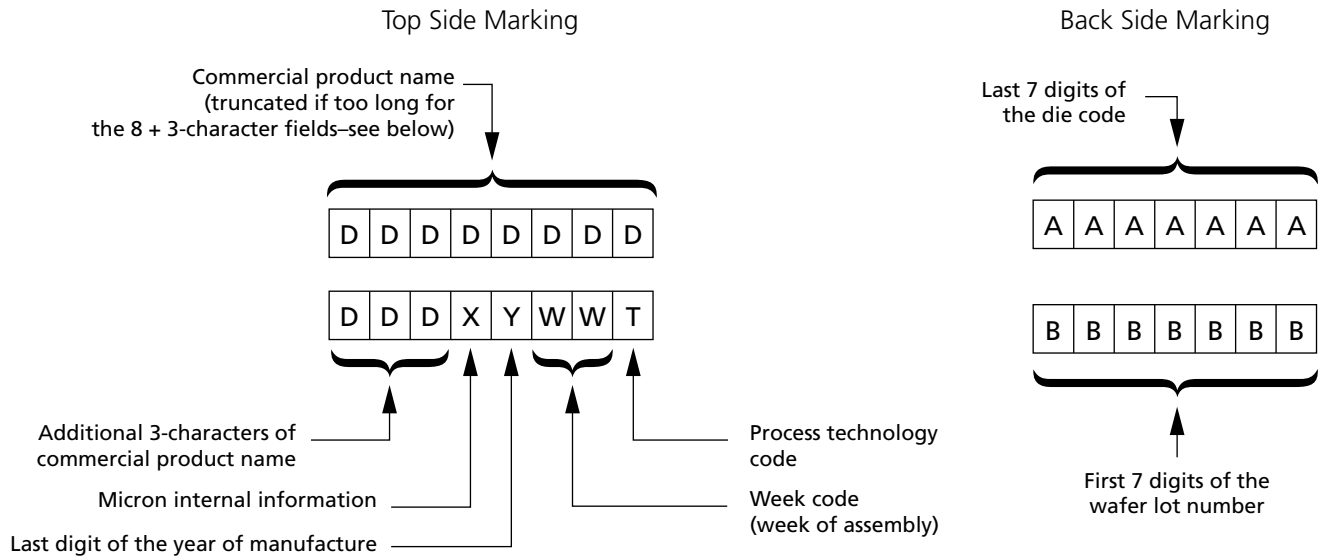
**Table 8: TBGA 24 (ZM) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (10 + 7-Digit)	Litho	Temperature Grade	Type
M25PX	16Mb	M25PX16SOVZM6TP	25PX16SO VZM6P 4	110nm	-40 to 85°C	Industrial
M25PX	16Mb	M25PX16STVZM6TP	25PX16ST VZM6P 4	110nm	-40 to 85°C	Industrial
M25PX	16Mb	M25PX16-VZM6P or TP	25PX16 VZM6P 4	110nm	-40 to 85°C	Industrial
M25PX	32Mb	M25PX32SOVZM6E	25PX32SO VZM6E 4	110nm	-40 to 85°C	Industrial
M25PX	32Mb	M25PX32-VZM6E or F	25PX32 VZM6E 4	110nm	-40 to 85°C	Industrial
M25PX	32Mb	M25PX32-VZM6FBA	25PX32 VZM6BA 4	110nm	-40 to 85°C	Auto
M25PX	64Mb	M25PX64-VZM6P or TP	25PX64 VZM6P 4	110nm	-40 to 85°C	Industrial

## Part Marks for N25Q Product Family

The following product marks are for the N25Q product family's packages.

**Figure 9: SO8N Component Marks, Package Option: SC**

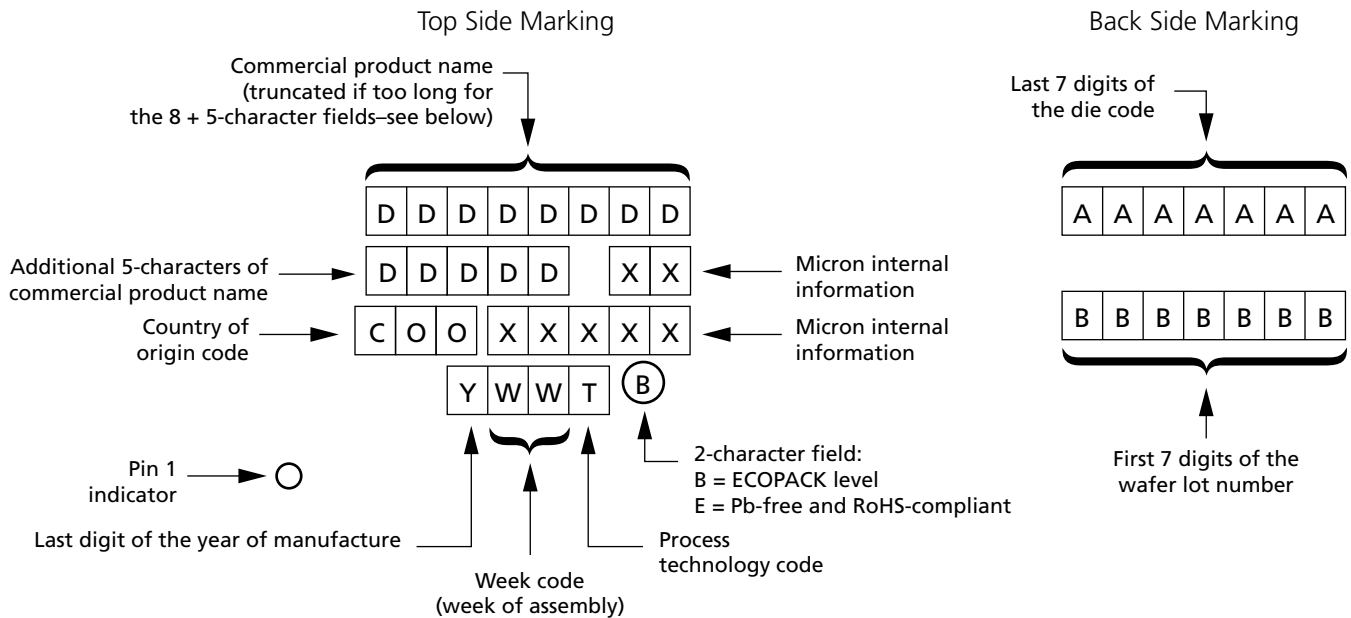


The SO8N (SOP2-8/150 mil) package is an 8-pin, narrow SOIC. The part number option code is SC.

**Table 9: SO8N (SC) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8 + 3-Digit)	Technology Code	Litho	Temperature Grade	Type
N25Q	16Mb	N25Q016A11ESC40F or G	25Q01611 E40	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13ESC40F or G	25Q03213 E40	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13ESCA0F	25Q03213 EA0	A	65nm	-40 to 125°C	Auto

**Figure 10: SO8W V1 Component Marks, Package Option: SE**



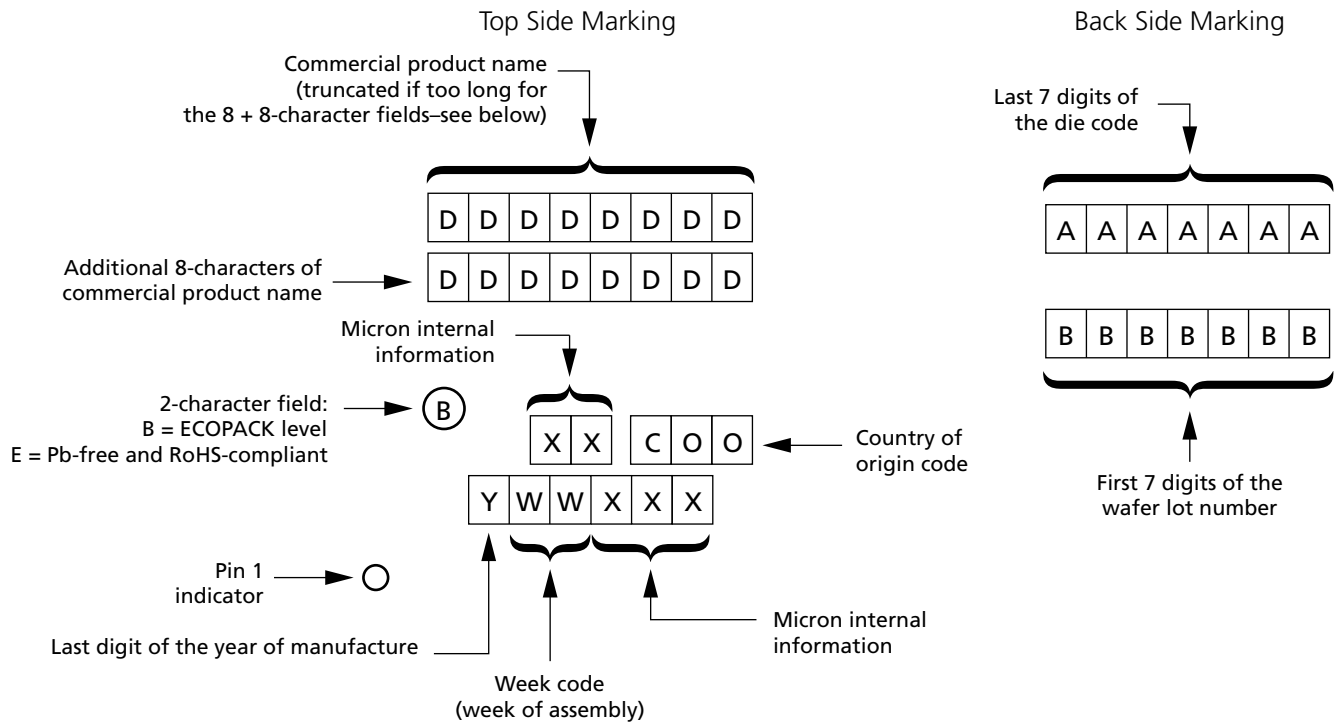
The SO8W (SOP2-8/208 mil) V1 package is an 8-pin, wide SOIC. The part number option code is SE.

**Table 10: SO8W V1 (SE) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8 + 5-Digit)	Technology Code	Litho	Temperature Grade	Type
N25Q	32Mb	N25Q032A11ESE40F or G	25Q03211 E40	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A11ESECFE or F	25Q03211 ECF	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13ESE40E or F or G	25Q03213 E40	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13ESEC0E or F or G	25Q03213 EC0	A	65nm	-40 to 85°C	Industrial



**Figure 11: SO8W V2 Component Marks, Package Option: SE**



The SO8W (SOP2-8/208 mil) V2 package is an 8-pin, wide (208-mil) SOIC. The part number option code is SE.

**Table 11: SO8W V2 (SE) Marketing Part Numbers**

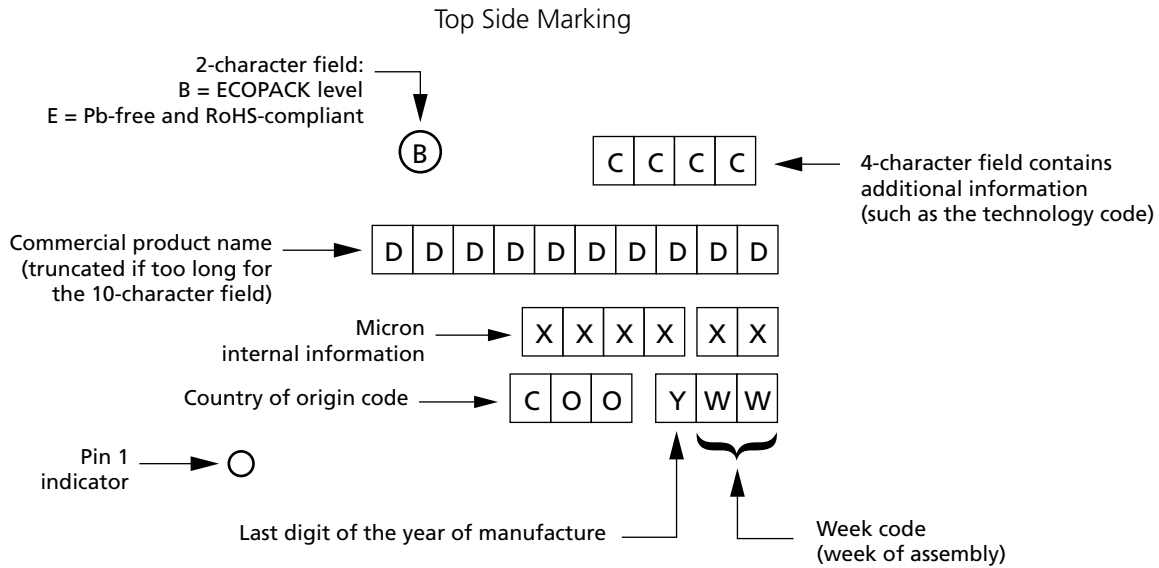
Family	Density	Marketing Part Number	Marking (8 + 8-Digit)	Litho	Temperature Grade	Type
N25Q	32Mb	N25Q032A11ESEA0F	25Q032 11EA0	65nm	-40 to 125°C	Auto
N25Q	32Mb	N25Q032A13ESEA0F	25Q032A 13EA0	65nm	-40 to 125°C	Auto
N25Q	32Mb	N25Q032A13ESEH0F	25Q032A 13EA0	65nm	-40 to 85°C	Auto
N25Q	64Mb	N25Q064A11ESE40E or F or G	25Q064A 11E40	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A11ESECFE or F	25Q064A 11ECF	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A11ESEA0F	25Q064 11EA0	65nm	-40 to 125°C	Auto
N25Q	64Mb	N25Q064A13ESE40E or F or G	25Q064A 13E40	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13ESED0E or F or G	25Q064A 13ED0	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13ESEDFF	25Q064A 13EDF	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13ESEA0F	25Q064A 13EA0	65nm	-40 to 125°C	Auto
N25Q	64Mb	N25Q064A13ESEH0E or F	25Q064A 13EA0	65nm	-40 to 85°C	Auto
N25Q	64Mb	N25Q064A13ESE4ME or F or G	25Q064A 13E4M	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A11ESE40F or G	25Q128A 11E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A11ESECFE or F	25Q128A 11ECF	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13ESE40E or F or G	25Q128A 13E40	65nm	-40 to 85°C	Industrial



**Table 11: S08W V2 (SE) Marketing Part Numbers (Continued)**

<b>Family</b>	<b>Density</b>	<b>Marketing Part Number</b>	<b>Marking (8 + 8-Digit)</b>	<b>Litho</b>	<b>Temperature Grade</b>	<b>Type</b>
N25Q	128Mb	N25Q128A13ESEDFF	25Q128A 13EDF	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13ESEA0F	25Q128A 13EA0	65nm	-40 to 125°C	Auto
N25Q	128Mb	N25Q128A13ESEH0E	25Q128A 13EA0	65nm	-40 to 85°C	Auto

**Figure 12: SO16W V1 Component Marks, Package Option: SF**

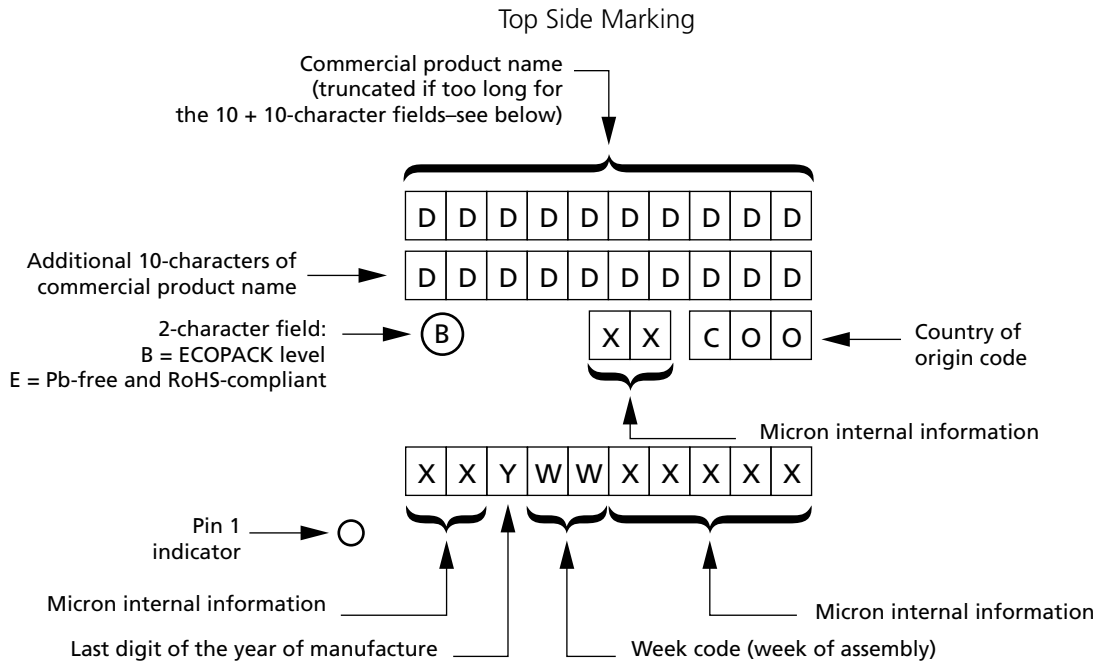


The SO16W (SOP2-16/300 mil) V1 package is a 16-pin, wide (300-mil) SOIC. The part number option code is SF.

**Table 12: SO16W V1 (SF) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (10-Digit)	Technology Code (4-Digit)	Litho	Temperature Grade	Type
N25Q	32Mb	N25Q032A11ESF40F or G	25Q03211	E40A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13ESF40F or G	25Q03213	E40A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13ESFA0F	25Q03213	EA0A	65nm	-40 to 125°C	Auto
N25Q	32Mb	N25Q032A13ESFH0F	25Q03213	EA0A	65nm	-40 to 85°C	Auto
N25Q	128Mb	N25Q128A13BSFH0F	25Q2813BH0	A	65nm	-40 to 85°C	Auto

**Figure 13: SO16W V2 Component Marks, Package Option: SF**



The SO16W (SOP2-16/300 mil) V2 package is a 16-pin, wide (300-mil) SOIC. The part number option code is SF.

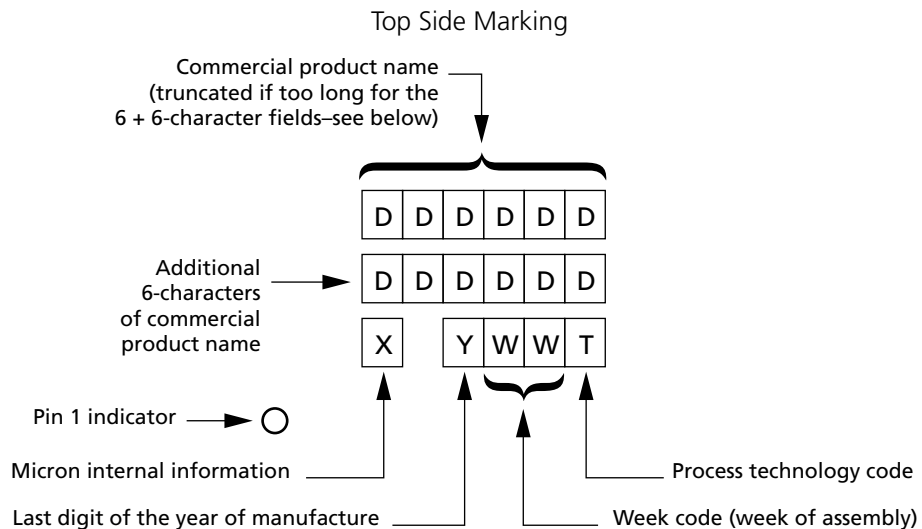
**Table 13: SO16W V2 (SF) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (10 + 10-Digit)	Litho	Temperature Grade	Type
N25Q	64Mb	N25Q064A13ESF40E or F or G	25Q064A 13E40	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13ESFD0F or G	25Q064A 13ED0	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13ESFA0F	25Q064A 13EA0	65nm	-40 to 125°C	Auto
N25Q	64Mb	N25Q064A13ESFH0E or F	25Q064A 13EA0	65nm	-40 to 85°C	Auto
N25Q	128Mb	N25Q128A11ESF40F or G	25Q128A 11E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13ESF40E or F or G	25Q128A 13E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13ESFA0F	25Q128A 13EA0	65nm	-40 to 125°C	Auto
N25Q	128Mb	N25Q128A13ESFH0E or F	25Q128A 13EA0	65nm	-40 to 85°C	Auto
N25Q	256Mb	N25Q256A11ESF40F or G	25Q256A 11E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A81ESF40F or G	25Q256A 81E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A13ESF40F or G	25Q256A 13E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A13ESFA0F	25Q256A 13EA0	65nm	-40 to 125°C	Auto
N25Q	256Mb	N25Q256A13ESFH0F	25Q256A 13EA0	65nm	-40 to 85°C	Auto
N25Q	256Mb	N25Q256A73ESF40F or G	25Q256A 73E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A83ESF40E or F or G	25Q256A 83E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A83ESFA0F	25Q256A 83EA0	65nm	-40 to 125°C	Auto

**Table 13: S016W V2 (SF) Marketing Part Numbers (Continued)**

Family	Density	Marketing Part Number	Marking (10 + 10-Digit)	Litho	Temperature Grade	Type
N25Q	512Mb	N25Q512A11GSF40F or G	25Q512A 11G40	65nm	-40 to 85°C	Industrial
N25Q	512Mb	N25Q512A81GSF40F or G	25Q512A 81G40	65nm	-40 to 85°C	Industrial
N25Q	512Mb	N25Q512A13GSF40F or G	25Q512A 13G40	65nm	-40 to 85°C	Industrial
N25Q	512Mb	N25Q512A13GSFA0F	25Q512A 13GA0	65nm	-40 to 125°C	Auto
N25Q	512Mb	N25Q512A13GSFH0E	25Q512A 13GA0	65nm	-40 to 85°C	Auto
N25Q	512Mb	N25Q512A83GSF40F or G	25Q512A 83G40	65nm	-40 to 85°C	Industrial
N25Q	512Mb	N25Q512A83GSFA0F	25Q512A 83GA0	65nm	-40 to 125°C	Auto
N25Q	1Gb	N25Q00AA11GSF40F or G	25Q00AA 11G40	65nm	-40 to 85°C	Industrial
N25Q	1Gb	N25Q00AA13GSF40F or G	25Q00AA 13G40	65nm	-40 to 85°C	Industrial

**Figure 14: DFN/3x4 V1 Component Marks, Package Option: F4**

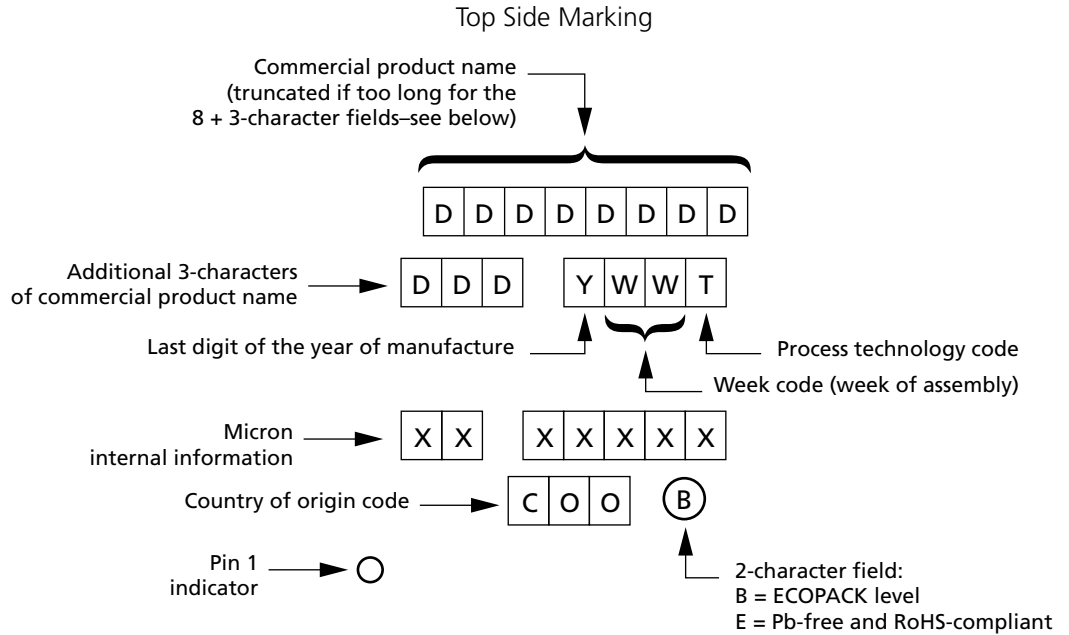


The DFN/3x4 (U-PDFN-8/3x4) package is a 3mm x 4mm, ultra thin plastic with eight terminal pads. The part number option code is F4.

**Table 14: DFN/3x4 V1 (F4) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (6 + 6-Digit)	Technology Code	Litho	Temperature Grade	Type
N25Q	32Mb	N25Q032A11EF440E or F	25Q032 11E40	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13EF440E or F	25Q032 13E40	A	65nm	-40 to 85°C	Industrial

**Figure 15: DFN/6x5 V1 Component Marks, Package Option: F6**

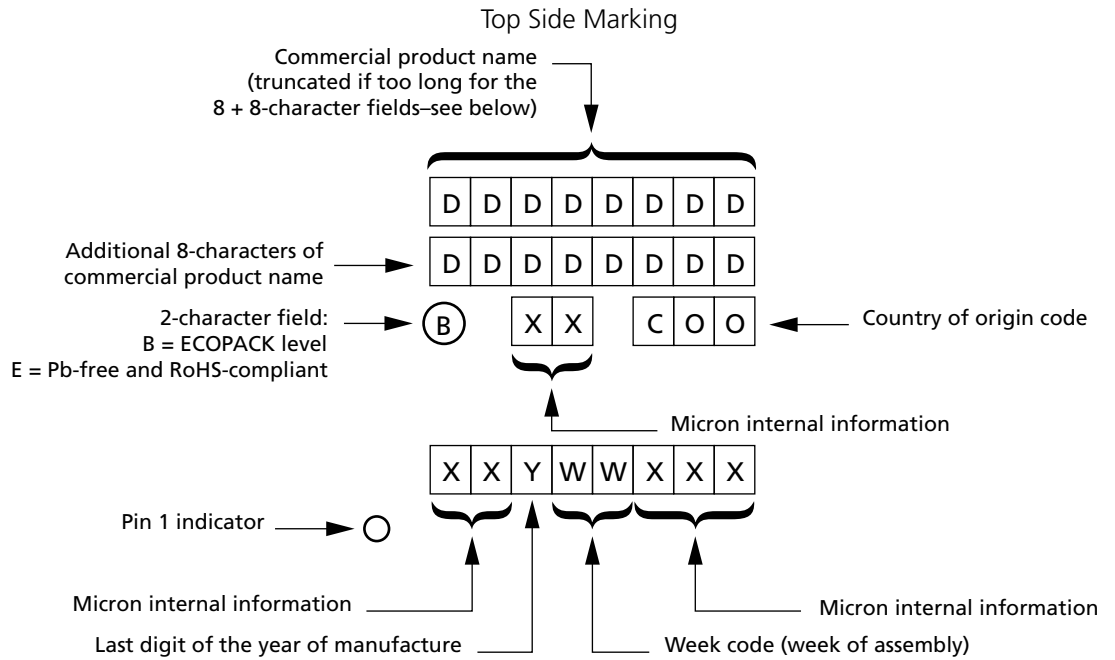


The DFN/6x5 (V-PDFN-8/6x5) package is a 6mm x 5mm, very thin plastic with eight terminal pads. The part number option code is F6.

**Table 15: DFN/6x5 V1 (F6) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8 + 3-Digit)	Technology Code	Litho	Temperature Grade	Type
N25Q	8Mb	N25Q008A11EF640E or F	25Q00811 E40	A	65nm	-40 to 85°C	Industrial
N25Q	16Mb	N25Q016A11EF640E or F	25Q01611 E40	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A11EF640E or F	25Q03211 E40	A	65nm	-40 to 85°C	Industrial
N25Q	32Mb	N25Q032A13EF640E or F	25Q03213 E40	A	65nm	-40 to 85°C	Industrial

**Figure 16: DFN/6x5 V2 Component Marks, Package Option:F6, F7 and W7**

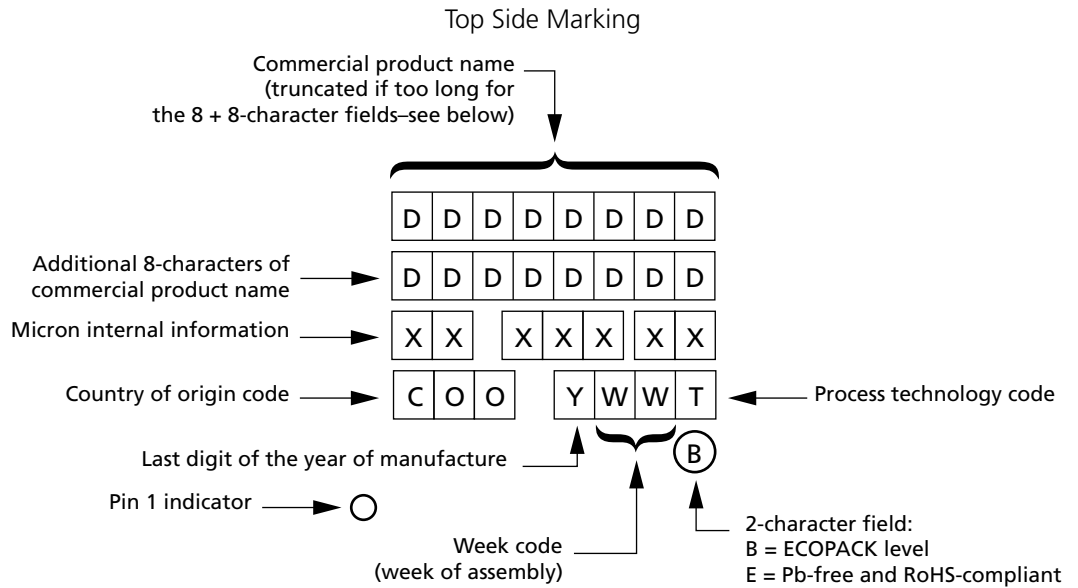


The DFN/6x5 (V-PDFN-8/6x5) package is a 6mm x 5mm, very thin plastic with eight terminal pads. The part number option code is F6, F7 and W7.

**Table 16: DFN/6x5 V2 (F6, F7 and W7) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8 + 8-Digit)	Litho	Temperature Grade	Type
N25Q	64Mb	N25Q064A11EF640E or F	25Q064A 11E40	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13EF640E or F	25Q064A 13E40	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13EW74ME or F	25Q064A 13E4M	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13EW7D0E or F	25Q064A 13ED0	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A11EF740E or F	25Q128A 11E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13EF740E or F	25Q128A 13E40	65nm	-40 to 85°C	Industrial

**Figure 17: DFN/8x6 V1 Component Marks, Package Option: F8**



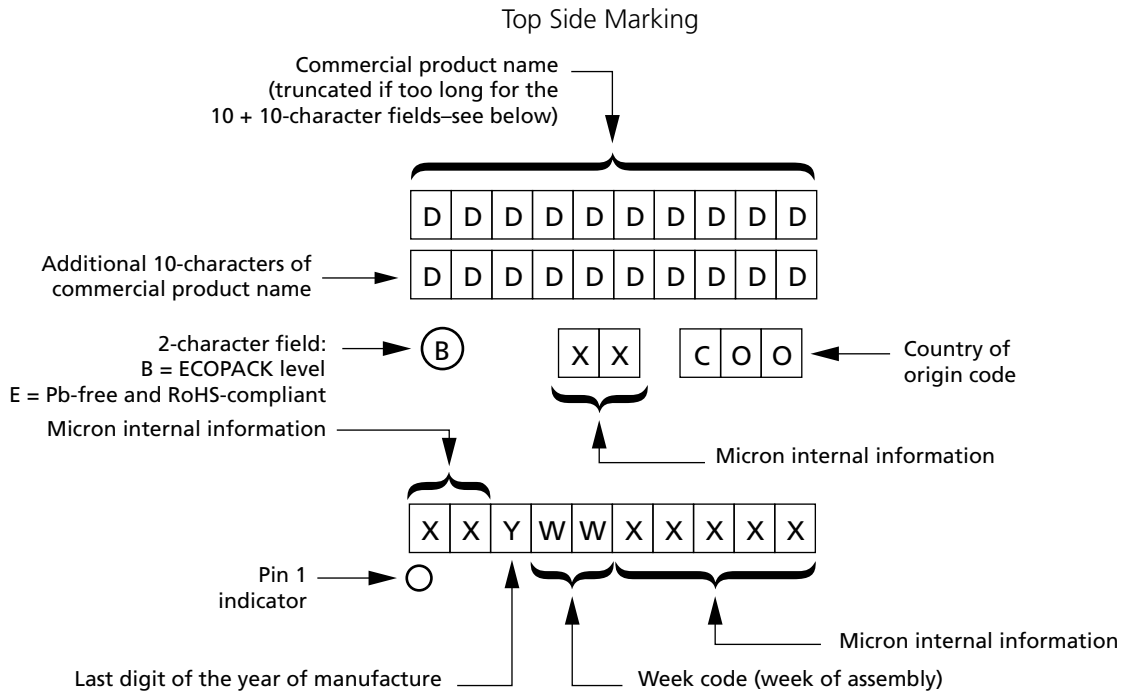
The DFN/8x6 (V-PDFN-8/8x6) V1 package is a 8mm x 6mm, ultra thin plastic with eight terminal pads. The part number option code is F8.

**Table 17: DFN/8x6 V1 (F8) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (8+ 8-Digit)	Technology Code	Litho	Temperature Grade	Type
N25Q	32Mb	N25Q032A13EF840E or F	25Q032 13E40	A	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13BF840E or F	25Q28 13B40	A	65nm	-40 to 85°C	Industrial



**Figure 18: DFN/8x6 V2 Component Marks, Package Option: F8 and W9**

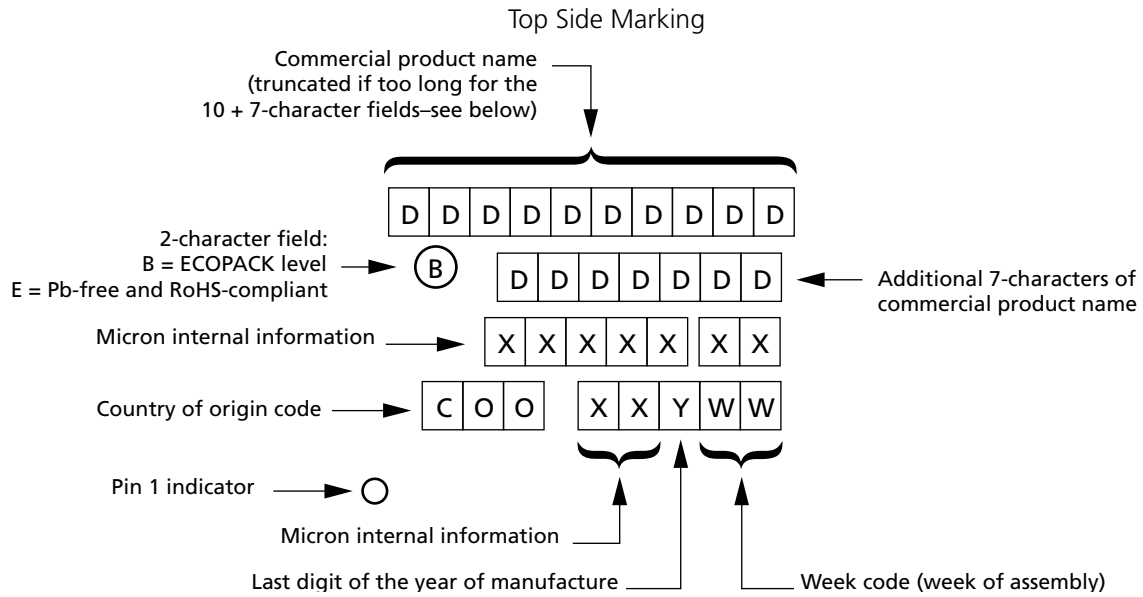


The DFN/8x6 (U-PDFN-8/8x6) V2 package is a 8mm x 6mm, ultra thin plastic with eight terminal pads. The part number option code is F8 and W9.

**Table 18: DFN/8x6 V2 (F8 and W9) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (10 + 10-Digit)	Litho	Temperature Grade	Type
N25Q	64Mb	N25Q064A13EF840E or F	25Q064A 13E40	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13EW9D0E or F	25Q064A 13ED0	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13EF8A0F	25Q064A 13EA0	65nm	-40 to 125°C	Auto
N25Q	64Mb	N25Q064A13EF8H0E or F	25Q064A 13EA0	65nm	-40 to 85°C	Auto
N25Q	128Mb	N25Q128A11EF840E or F	25Q128A 11E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13EF840E or F	25Q128A 13E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13EF8A0F	25Q128A 13EA0	65nm	-40 to 125°C	Auto
N25Q	256Mb	N25Q256A11EF840E or F	25Q256A 11E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A13EF840E or F	25Q256A 13E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A13EF8A0F	25Q256A 13EA0	65nm	-40 to 125°C	Auto
N25Q	256Mb	N25Q256A33EF840F or F	25Q256A 33E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A13EF84A0F	25Q256A 13EA0	65nm	-40 to 125°C	Auto
N25Q	512Mb	N25Q512A13GF840E or F	25Q512A 13G40	65nm	-40 to 85°C	Industrial

**Figure 19: TBGA 24 V1 Component Marks, Package Option: 12**

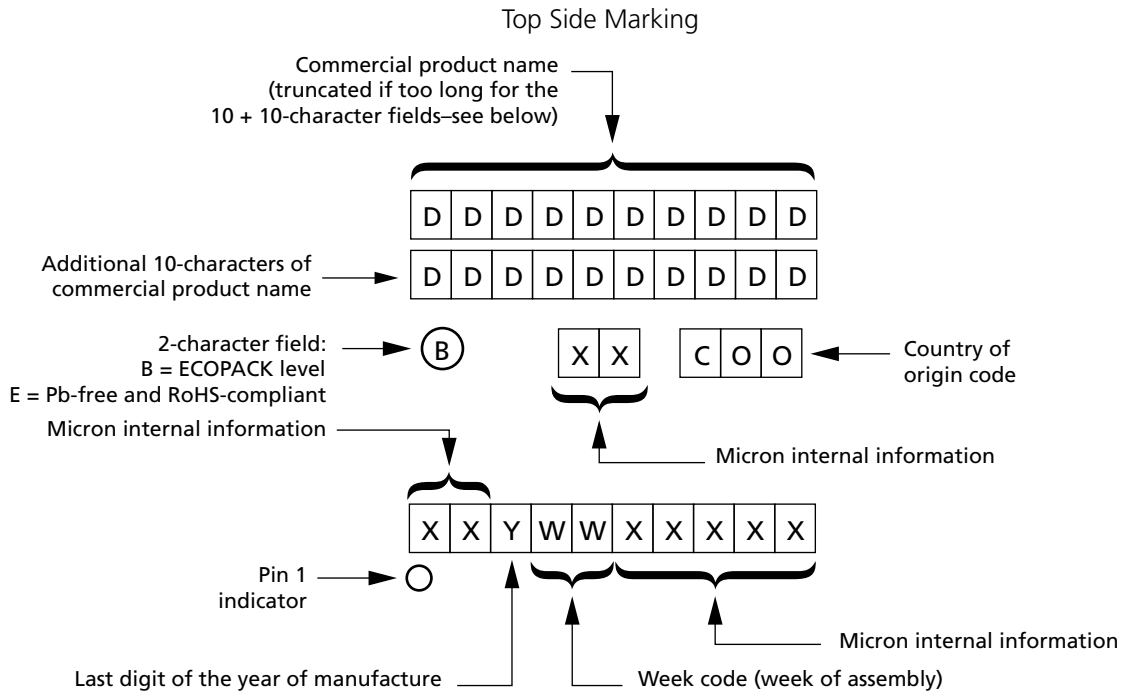


The TBGA 24 (T-PBGA-24b05/6x8) V1 package is a 6mm x 8mm, 24-ball, thin plastic ball grid array. The part number option code is 12.

**Table 19: TBGA 24 V1 (12) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (10 + 7-Digit)	Litho	Temperature Grade	Type
N25Q	32Mb	N25Q032A13E1240E or F	25Q032 13E40 A	65nm	-40 to 85°C	Industrial

**Figure 20: TBGA 24 V2 Component Marks, Package Option: 12,14**



The TBGA 24 (T-PBGA-24b05/6x8) V2 package is a 6mm x 8mm, 24-ball, thin plastic ball grid array. The part number option code is 12,14

**Table 20: TBGA 24 V2 (12 and 14) Marketing Part Numbers**

Family	Density	Marketing Part Number	Marking (10 + 10-Digit)	Litho	Temperature Grade	Type
N25Q	64Mb	N25Q064A11E12A0F	25Q064 11EA0	65nm	-40 to 125°C	Auto
N25Q	64Mb	N25Q064A13E1240E or F	25Q064A 13E40	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13E12D0E or F	25Q064A 13ED0	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13E14D0E or F	25Q064A 13ED0	65nm	-40 to 85°C	Industrial
N25Q	64Mb	N25Q064A13E12A0F	25Q064A 13EA0	65nm	-40 to 125°C	Auto
N25Q	64Mb	N25Q064A13E12H0F	25Q064A 13EA0	65nm	-40 to 85°C	Auto
N25Q	128Mb	N25Q128A11E1240E or F	25Q128A 11E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13E1240E or F	25Q128A 13E40	65nm	-40 to 85°C	Industrial
N25Q	128Mb	N25Q128A13E12A0F	25Q128A 13EA0	65nm	-40 to 125°C	Auto
N25Q	256Mb	N25Q256A11E1240E or F	25Q256A 11E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A13E1240E or F	25Q256A 13E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A83E1240E or F	25Q256A 83E40	65nm	-40 to 85°C	Industrial
N25Q	256Mb	N25Q256A13E12A0F	25Q256A 13EA0	65nm	-40 to 125°C	Auto
N25Q	512Mb	N25Q512A11G1240E or F	25Q512A 11G40	65nm	-40 to 85°C	Industrial
N25Q	512Mb	N25Q512A13G1240E or F	25Q512A 13G40	65nm	-40 to 85°C	Industrial
N25Q	512Mb	N25Q512A13G12A0F	25Q512A 13GA0	65nm	-40 to 125°C	Auto



**Table 20: TBGA 24 V2 (12 and 14) Marketing Part Numbers (Continued)**

<b>Family</b>	<b>Density</b>	<b>Marketing Part Number</b>	<b>Marking (10 + 10-Digit)</b>	<b>Litho</b>	<b>Temperature Grade</b>	<b>Type</b>
N25Q	512Mb	N25Q512A13G12H0F	25Q512A 13GH0	65nm	-40 to 85°C	Auto
N25Q	512Mb	N25Q512A83G1240E or F	25Q512A 83G40	65nm	-40 to 85°C	Industrial
N25Q	1Gb	N25Q00AA11G1240E or F	25Q00AA 11G40	65nm	-40 to 85°C	Industrial
N25Q	1Gb	N25Q00AA13G1240E or F	25Q00AA 13G40	65nm	-40 to 85°C	Industrial

## Revision History

### Rev. H – 4/16

- In all tables, changed Technology column title to Litho
- In all tables (Type column), changed STD value to Industrial
- Updated Table 16: DFN/6x5 V2 (F6, F7 and W7) Marketing Part Numbers
- Updated Table 17: DFN/8x6 V1 (F8) Marketing Part Numbers

### Rev. G – 6/15

- Updated M25P automotive information.
- Updated Fig 8 TBGA and Fig 19 TBGA.
- Added F7, W7, W9, 14 part number option codes, and relative MPNs.
- Updated N25Q automotive information and general part numbers.

### Rev. F – 4/15

- Updated M25PE40 DFN/3x4 Marking code.

### Rev. E – 4/14

- Updated Marketing Part Numbers tables throughout.
- Converted to CMS.

### Rev. D – 7/13

- Updated SO16W (MF) Marketing Part Numbers table.

### Rev. C – 5/13

- Updated SO8W V1 (SE) Marketing Part Numbers table.
- Updated So8 V2 Component Marks, Package Option SE figure.
- Updated SO8W V2 (SE) Marketing Part Numbers table.

### Rev. B – 12/12

- Corrected SO16W V1 (SF) and TBGA 24 V2 (12) Marketing Part Numbers tables.

### Rev. A – 11/12

- Initial release.

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