# Standard NAND Flash Part Numbering System
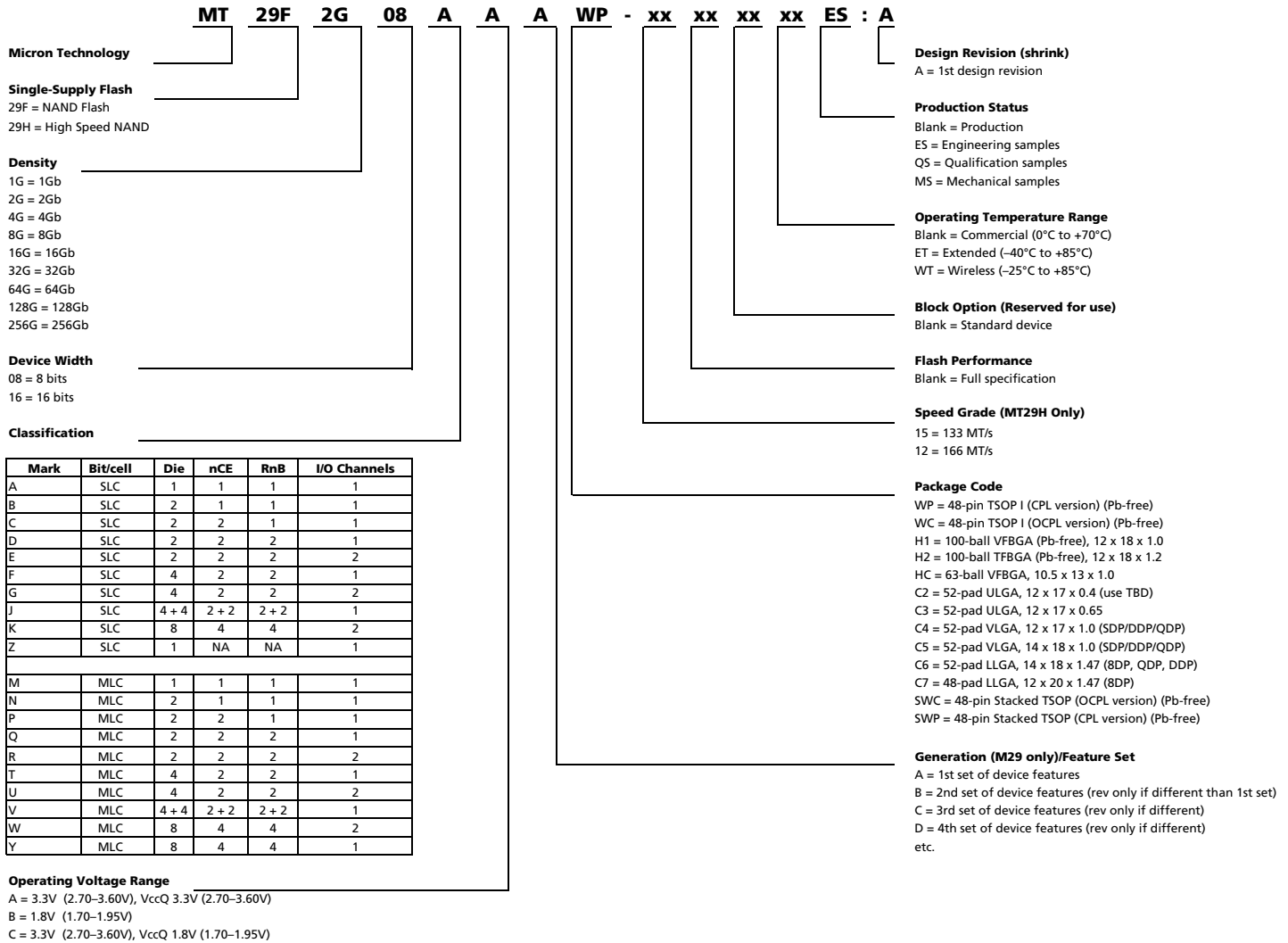
*Micron's part numbering system is available at **www.micron.com/numbering***

## Standard NAND Flash*

MT 29F 2G 08 A A A WP - xx xx xx xx ES : A

**Micron Technology**

**Single-Supply Flash**
29F = NAND Flash
29H = High Speed NAND

**Density**
1G = 1Gb
2G = 2Gb
4G = 4Gb
8G = 8Gb
16G = 16Gb
32G = 32Gb
64G = 64Gb
128G = 128Gb
256G = 256Gb

**Device Width**
08 = 8 bits
16 = 16 bits

**Classification**

| Mark | Bit/cell | Die | nCE | RnB | I/O Channels |
|------|----------|-----|-----|-----|--------------|
| A | SLC | 1 | 1 | 1 | 1 |
| B | SLC | 2 | 1 | 1 | 1 |
| C | SLC | 2 | 2 | 1 | 1 |
| D | SLC | 2 | 2 | 2 | 1 |
| E | SLC | 2 | 2 | 2 | 2 |
| F | SLC | 4 | 2 | 2 | 1 |
| G | SLC | 4 | 2 | 2 | 2 |
| J | SLC | 4 + 4 | 2 + 2 | 2 + 2 | 1 |
| K | SLC | 8 | 4 | 4 | 2 |
| Z | SLC | 1 | NA | NA | 1 |
| | | | | | |
| M | MLC | 1 | 1 | 1 | 1 |
| N | MLC | 2 | 1 | 1 | 1 |
| P | MLC | 2 | 2 | 1 | 1 |
| Q | MLC | 2 | 2 | 2 | 1 |
| R | MLC | 2 | 2 | 2 | 2 |
| T | MLC | 4 | 2 | 2 | 1 |
| U | MLC | 4 | 2 | 2 | 2 |
| V | MLC | 4 + 4 | 2 + 2 | 2 + 2 | 1 |
| W | MLC | 8 | 4 | 4 | 2 |
| Y | MLC | 8 | 4 | 4 | 1 |

**Operating Voltage Range**
A = 3.3V  (2.70–3.60V), VccQ 3.3V (2.70–3.60V)
B = 1.8V  (1.70–1.95V)
C = 3.3V  (2.70–3.60V), VccQ 1.8V (1.70–1.95V)

**Design Revision (shrink)**
A = 1st design revision

**Production Status**
Blank = Production
ES = Engineering samples
QS = Qualification samples
MS = Mechanical samples

**Operating Temperature Range**
Blank = Commercial (0°C to +70°C)
ET = Extended (–40°C to +85°C)
WT = Wireless (–25°C to +85°C)

**Block Option (Reserved for use)**
Blank = Standard device

**Flash Performance**
Blank = Full specification

**Speed Grade (MT29H Only)**
15 = 133 MT/s
12 = 166 MT/s

**Package Code**
WP = 48-pin TSOP I (CPL version) (Pb-free)
WC = 48-pin TSOP I (OCPL version) (Pb-free)
H1 = 100-ball VFBGA (Pb-free), 12 x 18 x 1.0
H2 = 100-ball TFBGA (Pb-free), 12 x 18 x 1.2
HC = 63-ball VFBGA, 10.5 x 13 x 1.0
C2 = 52-pad ULGA, 12 x 17 x 0.4 (use TBD)
C3 = 52-pad ULGA, 12 x 17 x 0.65
C4 = 52-pad VLGA, 12 x 17 x 1.0 (SDP/DDP/QDP)
C5 = 52-pad VLGA, 14 x 18 x 1.0 (SDP/DDP/QDP)
C6 = 52-pad LLGA, 14 x 18 x 1.47 (8DP, QDP, DDP)
C7 = 48-pad LLGA, 12 x 20 x 1.47 (8DP)
SWC = 48-pin Stacked TSOP (OCPL version) (Pb-free)
SWP = 48-pin Stacked TSOP (CPL version) (Pb-free)

**Generation (M29 only)/Feature Set**
A = 1st set of device features
B = 2nd set of device features (rev only if different than 1st set)
C = 3rd set of device features (rev only if different)
D = 4th set of device features (rev only if different)
etc.

*Contact Micron for help differentiating between standard and next-generation NAND offerings.

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