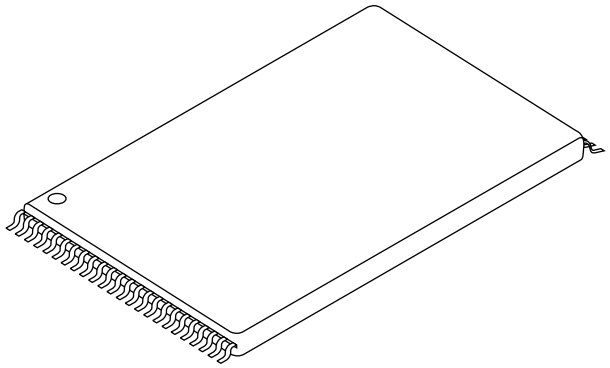
NAND Flash Memory

MT29F2G08AABWP/MT29F2G16AABWP
MT29F4G08BABWP/MT29F4G16BABWP
MT29F8G08FABWP

Features

- Organization:
  - Page size:
    x8: 2,112 bytes (2,048 + 64 bytes)
    x16: 1,056 words (1,024 + 32 words)
  - Block size: 64 pages (128K + 4K bytes)
  - Device size: 2Gb: 2,048 blocks; 4Gb: 4,096 blocks; 8Gb: 8,192 blocks
- Read performance:
  - Random read: 25µs
  - Sequential read: 30ns (3V x8 only)
- Write performance:
  - Page program: 300µs (TYP)
  - Block erase: 2ms (TYP)
- Endurance: 100,000 PROGRAM/ERASE cycles
- Data retention: 10 years
- First block (block address 00h) guaranteed to be valid without ECC (up to 1,000 PROGRAM/ERASE cycles)
- VCC: 2.7V–3.6V
- Automated PROGRAM and ERASE
- Basic NAND command set:
  - PAGE READ, RANDOM DATA READ, READ ID, READ STATUS, PROGRAM PAGE, RANDOM DATA INPUT, PROGRAM PAGE CACHE MODE, INTERNAL DATA MOVE, INTERNAL DATA MOVE with RANDOM DATA INPUT, BLOCK ERASE, RESET
- New commands:
  - PAGE READ CACHE MODE
  - READ UNIQUE ID (contact factory)
  - READ ID2 (contact factory)
- Operation status byte provides a software method of detecting:
  - PROGRAM/ERASE operation completion
  - PROGRAM/ERASE pass/fail condition
  - Write-protect status
- Ready/busy# (R/B#) pin provides a hardware method of detecting PROGRAM or ERASE cycle completion
- PRE pin: prefetch on power up
- WP# pin: hardware write protect

Figure 1: 48-Pin TSOP Type 1



Options				Marking
• Density:				
2Gb (single die)				MT29F2GxxAAB
4Gb (dual-die stack)				MT29F4GxxBAB
8Gb (quad-die stack)				MT29F8GxxFAB
• Device width:				
x8				MT29Fxx08x
x16				MT29Fxx16x
• Configuration:	# of die	# of CE#	# of R/B#	
	1	1	1	A
	2	1	1	B
	4	2	2	F
• VCC: 2.7V–3.6V				A
• Second generation die				B
• Package:				
48 TSOP type I (lead-free)				WP
48 TSOP type I (NEW version, 8Gb device only, lead-free)				WA
48 TSOP type I (contact factory)				WG
• Operating temperature:				
Commercial (0°C to 70°C)				None
Extended temperature (-40°C to +85°C)				ET

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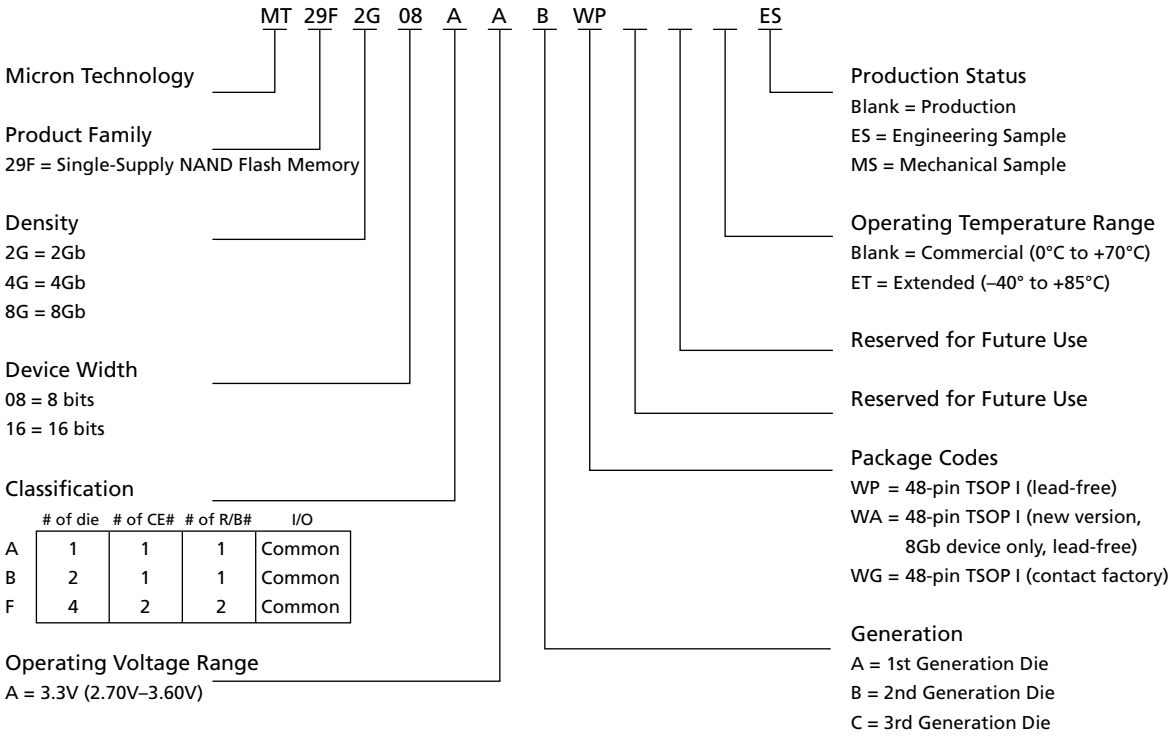
Part Numbering Information

Micron® NAND Flash devices are available in several different configurations and densities. (See Figure 2.)

Figure 2: Part Number Chart



Valid Part Number Combinations

After building the part number from the part numbering chart above, verify that the part number is valid using the Micron Parametric Part Search Web site at http://www.micron.com/partsearch to verify that the part number is offered and valid. If the device required is not on this list, contact the factory.

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Table of Contents

Features . . . 1
Part Numbering Information . . . 2
  Valid Part Number Combinations . . . 2
General Description . . . 7
Architecture . . . 10
Addressing . . . 10
Bus Operation . . . 16
  Control Signals . . . 16
  Commands . . . 16
  Address Input . . . 16
  Data Input . . . 17
  READs . . . 17
  Ready/Busy# . . . 17
  Minimum Rp . . . 18
  Power-On AUTO-READ . . . 21
Command Definitions . . . 22
  READ Operations . . . 23
    PAGE READ 00h-30h . . . 23
    RANDOM DATA READ 05h-E0h . . . 24
    PAGE READ CACHE MODE START 31h; PAGE READ CACHE MODE START LAST 3Fh . . . 24
    READ ID 90h . . . 26
    READ STATUS 70h . . . 27
  PROGRAM Operations . . . 29
    PROGRAM PAGE 80h-10h . . . 29
    SERIAL DATA INPUT 80h . . . 29
    RANDOM DATA INPUT 85h . . . 29
    PROGRAM PAGE CACHE MODE 80h-15h . . . 30
  Internal Data Move . . . 31
    READ FOR INTERNAL DATA MOVE 00h-35h . . . 31
    INTERNAL DATA MOVE 85h-10h . . . 31
  BLOCK ERASE Operation . . . 33
    BLOCK ERASE 60h-D0h . . . 33
  RESET Operation . . . 34
    RESET FFh . . . 34
  WRITE PROTECT Operation . . . 35
Error Management . . . 37
Electrical Characteristics . . . 38
  VCC Power Cycling . . . 38
Timing Diagrams . . . 42
Package Dimensions . . . 56

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List of Figures

Figure 1: 48-Pin TSOP Type 1 . . . 1
Figure 2: Part Number Chart . . . 2
Figure 3: NAND Flash Functional Block Diagram . . . 8
Figure 4: Pin Assignment (Top View) 48-Pin TSOP Type 1 . . . 8
Figure 5: Memory Map x8 . . . 11
Figure 6: Memory Map x16 . . . 11
Figure 7: Array Organization for MT29F2G08AxB (x8) . . . 12
Figure 8: Array Organization for MT29F2G16AxB (x16) . . . 13
Figure 9: Array Organization for MT29F4G08BxB and MT29F8G08FxB (x8) . . . 14
Figure 10: Array Organization for MT29F4G16BxB (x16) . . . 15
Figure 11: Time Constants . . . 17
Figure 12: READY/BUSY# Open Drain . . . 18
Figure 13: tR and tF . . . 18
Figure 14: Iol vs. Rp . . . 19
Figure 15: TC vs. Rp . . . 19
Figure 16: First Page Power-On AUTO-READ (3V VCC only) . . . 21
Figure 17: AC Waveforms During Power Transitions . . . 21
Figure 18: PAGE READ Operation . . . 23
Figure 19: RANDOM DATA READ Operation . . . 24
Figure 20: PAGE READ CACHE MODE . . . 25
Figure 21: READ ID Operation . . . 26
Figure 22: Status Register Operation . . . 28
Figure 23: PROGRAM and READ STATUS Operation . . . 29
Figure 24: RANDOM DATA INPUT . . . 29
Figure 25: PROGRAM PAGE CACHE MODE Example . . . 30
Figure 26: INTERNAL DATA MOVE . . . 32
Figure 27: INTERNAL DATA MOVE with RANDOM DATA INPUT . . . 32
Figure 28: BLOCK ERASE Operation . . . 33
Figure 29: RESET Operation . . . 34
Figure 30: ERASE Enable . . . 35
Figure 31: ERASE Disable . . . 35
Figure 32: PROGRAM Enable . . . 35
Figure 33: PROGRAM Disable . . . 36
Figure 34: COMMAND LATCH Cycle . . . 42
Figure 35: ADDRESS LATCH Cycle . . . 42
Figure 36: INPUT DATA LATCH . . . 43
Figure 37: SERIAL ACCESS Cycle After READ . . . 43
Figure 38: STATUS READ Cycle . . . 44
Figure 39: PAGE READ . . . 44
Figure 40: READ Operation with CE# “Don’t Care” . . . 45
Figure 41: RANDOM DATA READ . . . 45
Figure 42: PAGE READ CACHE MODE Timing Diagram, Part 1 of 2 . . . 46
Figure 43: PAGE READ CACHE MODE Timing Diagram, Part 2 of 2 . . . 47
Figure 44: PAGE READ CACHE MODE Timing without R/B#, Part 1 of 2 . . . 48
Figure 45: PAGE READ CACHE MODE Timing without R/B#, Part 2 of 2 . . . 49
Figure 46: READ ID Operation . . . 50
Figure 47: Program Operation with CE# “Don’t Care” . . . 50
Figure 48: PROGRAM PAGE Operation . . . 51
Figure 49: PROGRAM PAGE Operation with RANDOM DATA INPUT . . . 52
Figure 50: INTERNAL DATA MOVE . . . 52
Figure 51: PROGRAM PAGE CACHE MODE . . . 53

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Figure 52: PROGRAM PAGE CACHE MODE Ending on 15h 54
Figure 53: BLOCK ERASE Operation 55
Figure 54: RESET Operation 55
Figure 55: 48-Pin TSOP Type I 56

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