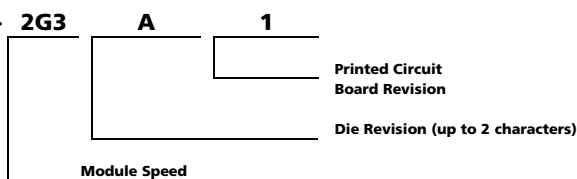
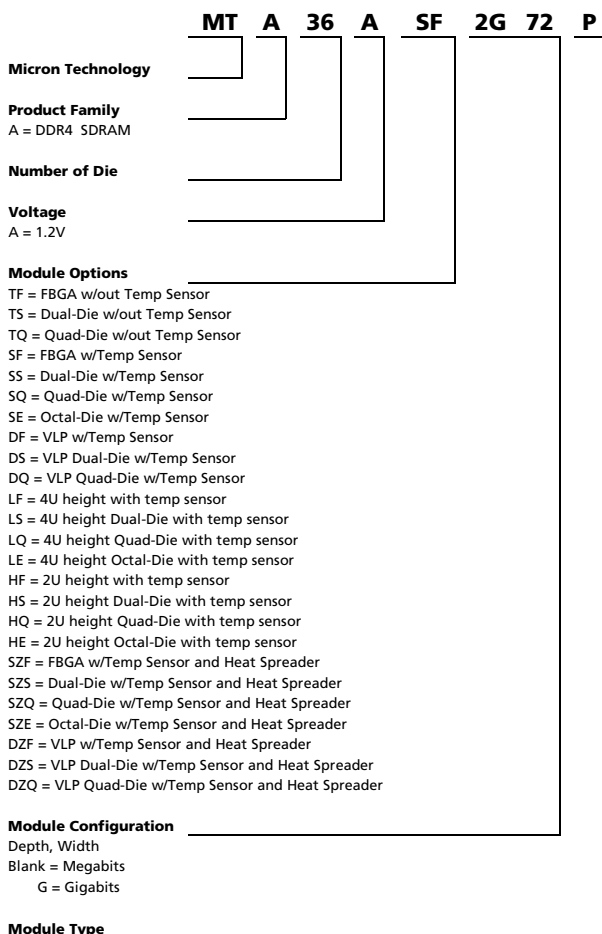


# DDR4 Module Part Numbering System

The part numbering system is available at [www.micron.com/numbering](http://www.micron.com/numbering)

## DDR4 SDRAM modules



### DDR4 SDRAM Modules

Module Speed Grade	Component Speed Grade/Part Mark	Component Speed Bin	Clock Freq. (MHz)	Data Rate (MT/s)	Module Bandwidth	Module Configuration SPD (CL-nRCD-nRP)
-2G1	-093E	DDR4-2133	1067	2133	PC4-2133	15-15-15
-2S1	-093H	DDR4-2133	1067	2133	PC4-2133	18-15-15
-2G3	-083	DDR4-2400	1200	2400	PC4-2400	17-17-17
-2G4	-083E	DDR4-2400	1200	2400	PC4-2400	16-16-16
-2S3	-083H	DDR4-2400	1200	2400	PC4-2400	20-18-18
-2S4	-083J	DDR4-2400	1200	2400	PC4-2400	19-17-17
-2G6	-075	DDR4-2666	1333	2666	PC4-2666	19-19-19
-2S6	-075H	DDR4-2666	1333	2666	PC4-2666	22-19-19
-2G7	-075E	DDR4-2666	1333	2666	PC4-2666	18-18-18
-2G9	-068	DDR4-2933	1467	2933	PC4-2933	21-21-21
-3G2	-062E	DDR4-3200	1600	3200	PC4-3200	22-22-22
-3S2	-062H	DDR4-3200	1600	3200	PC4-3200	26-22-22

SPD = serial presence-detect pin (module only)

CL = CAS latency; nRCD = active-to-command time; nRP = precharge time

### Package Codes

Pb-Free Devices	Package Descriptions
Z	Commercial temp; halogen-free; single-, dual-, quad- or octal-rank DIMM
DZ	Commercial temp; halogen-free; select dual-, quad- or octal-rank DIMM
DZM	Commercial temp; Reduced Standby; halogen-free; select dual-, quad- or octal-rank DIMM
IZ	Industrial temp, halogen-free; single-, dual- or quad-rank DIMM
TZ	Industrial temp, halogen-free; select dual- or quad-rank DIMM
ZM	Commercial temp; Reduced Standby; halogen-free; single-, dual-, quad- or octal-rank DIMM

Rev. 06-September-2016

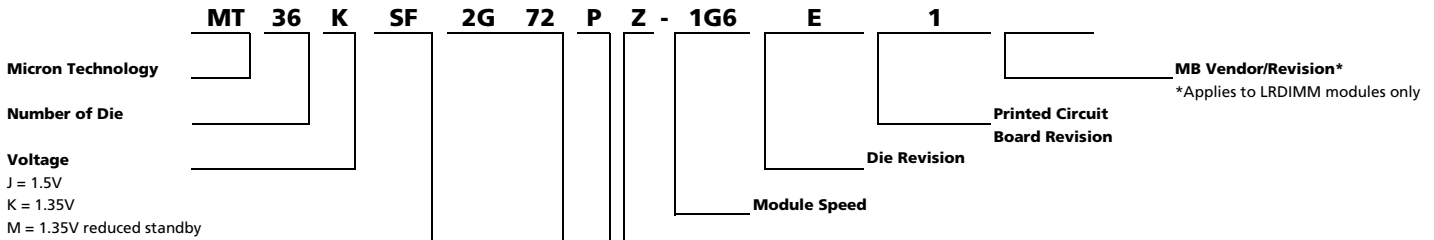
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# DDR3 Module Part Numbering System

The part numbering system is available at [www.micron.com/numbering](http://www.micron.com/numbering)

## DDR3 SDRAM modules



### DDR3 SDRAM Modules

Module Speed Grade	Component Speed Grade/Part Mark	JEDEC Component Speed Grade	Clock Freq. (MHz)	Data Rate (MT/s)	Module Bandwidth	Module Configuration SPD (CL <sup>1</sup> -RCD <sup>2</sup> -RP)
-80B	-25	DDR3-800	400	800	PC3-6400	6-6-6
-1G0	-187	DDR3-1066	533	1066	PC3-8500	8-8-8
-1G1	-187E	DDR3-1066	533	1066	PC3-8500	7-7-7
-1G2	-187F	DDR3-1066	533	1066	PC3-8500	6-6-6
-1G3	-15	DDR3-1333	667	1333	PC3-10600	10-10-10
-1G4	-15E	DDR3-1333	667	1333	PC3-10600	9-9-9
-1G5	-15F	DDR3-1333	667	1333	PC3-10600	8-8-8
-1GA**	-125	DDR3-1333	667	1333	PC3-10600	11-11-11
-1G6	-125	DDR3-1600	800	1600	PC3-12800	11-11-11
-1G7	-125E	DDR3-1600	800	1600	PC3-12800	10-10-10
-1G8	-125F	DDR3-1600	800	1600	PC3-12800	9-9-9
-1G9	-107	DDR3-1866	933	1866	PC3-14900	13-13-13
-1GB	-107E	DDR3-1866	933	1866	PC3-14900	12-12-12
-1GC	-107F	DDR3-1866	933	1866	PC3-14900	11-11-11
-2G1	-093	DDR3-2133	1067	2133	PC3-17000	14-14-14
-2G2	-093E	DDR3-2133	1067	2133	PC3-17000	13-13-13
-2G3	-093F	DDR3-2133	1067	2133	PC3-17000	12-12-12

\*\* -1GA = -1333 SPD with -125 tested DRAM

SPD = serial presence-detect pin (module only)

CL = CAS latency; <sup>1</sup>RCD = active-to-command time; <sup>2</sup>RP = precharge time

### Package Codes

Pb-Free Devices	Package Descriptions
Y	Commercial temp; single-, dual- or quad-rank DIMM
Z	Halogen-free; commercial temp; single-, dual-, quad- or octal-rank DIMM
IZ	Halogen-free; Industrial temp, commercial temp; single-, dual- or quad-rank DIMM
TZ	Halogen-free; Industrial temp; select dual- and quad-rank DIMM
DY	Commercial temp; select dual- or quad-rank DIMM
DZ	Halogen-free; commercial temp; select dual-, quad- or octal-rank DIMM

Rev. 6-Dec-2016

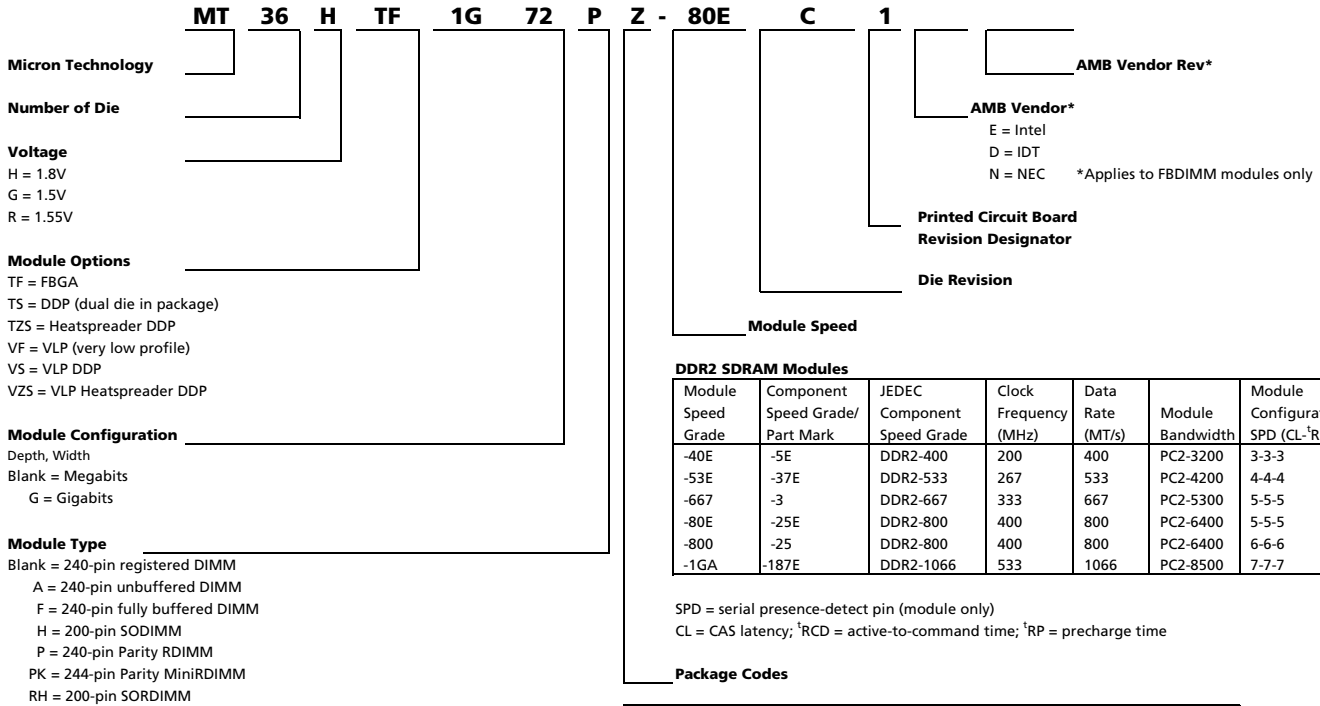
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# DDR2 Module Part Numbering System

The part numbering system is available at [www.micron.com/numbering](http://www.micron.com/numbering)

## DDR2 SDRAM modules



### DDR2 SDRAM Modules

Module Speed	Component Speed Grade/Part Mark	JEDEC Component Speed Grade	Clock Frequency (MHz)	Data Rate (MT/s)	Module Bandwidth	Module Configuration SPD (CL <sup>1</sup> RCD <sup>2</sup> RP)
-40E	-5E	DDR2-400	200	400	PC2-3200	3-3-3
-53E	-37E	DDR2-533	267	533	PC2-4200	4-4-4
-667	-3	DDR2-667	333	667	PC2-5300	5-5-5
-80E	-25E	DDR2-800	400	800	PC2-6400	5-5-5
-800	-25	DDR2-800	400	800	PC2-6400	6-6-6
-1GA	-187E	DDR2-1066	533	1066	PC2-8500	7-7-7

SPD = serial presence-detect pin (module only)

CL = CAS latency; <sup>2</sup>RCD = active-to-command time; <sup>1</sup>RP = precharge time

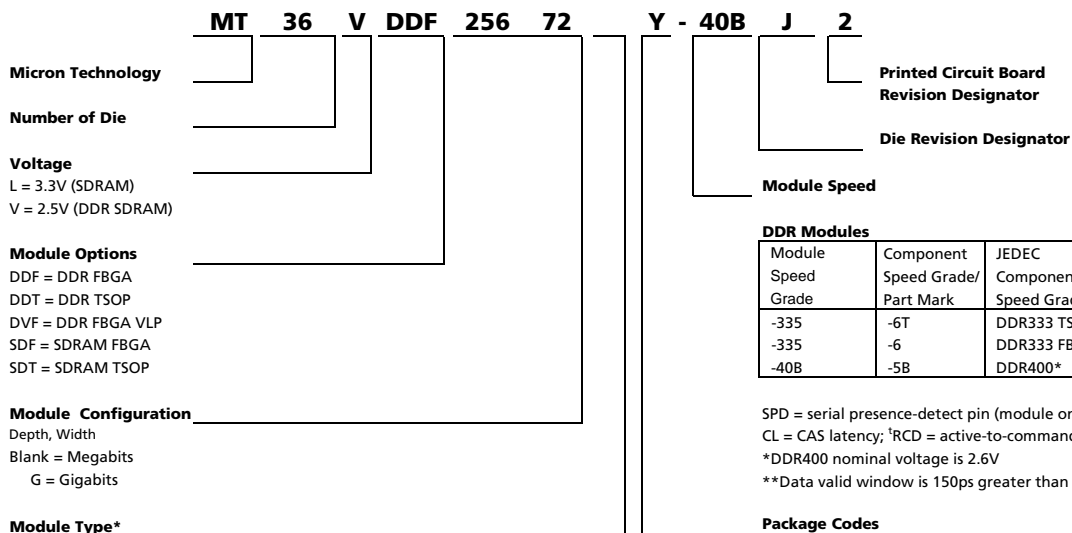
### Package Codes

Pb-Free Devices	Package Descriptions
Y	Commercial temp; single- or dual-rank DIMM
Z	Halogen-free; commercial temp; single- or dual-rank DIMM
DY	Commercial temp; select dual-rank
DZ	Halogen-free; commercial temp; select dual- or quad-rank DIMM
IY	Industrial temp; select single and dual-rank DIMM
TY	Industrial temp; select dual and quad-rank DIMM
IZ	Halogen-free; industrial temp; select single and dual-rank DIMM
TZ	Halogen-free; industrial temp; select dual and quad-rank DIMM

# DDR/SDRAM Module Part Numbering System

The part numbering system is available at [www.micron.com/numbering](http://www.micron.com/numbering)

## DDR/SDRAM modules



### DDR Modules

Module Speed Grade	Component Speed Grade/ Part Mark	JEDEC Component Speed Grade	Clock Frequency (MHz)	Data Rate (MT/s)	Module Bandwidth	Module Configuration SPD (CL <sup>1</sup> -RCD <sup>1</sup> - <sup>1</sup> RP)
-335	-6T	DDR333 TSOP	167	333	PC2700	2.5-3-3
-335	-6	DDR333 FBGA	167	333	PC2700	2.5-3-3**
-40B	-5B	DDR400*	200	400	PC3200	3-3-3

SPD = serial presence-detect pin (module only)  
CL = CAS latency; <sup>1</sup>RCD = active-to-command time; <sup>1</sup>RP = precharge time  
\*DDR400 nominal voltage is 2.6V  
\*\*Data valid window is 150ps greater than -6T

### Package Codes

Lead-Plated Devices	Pb-Free Devices	Package Descriptions
G	Y	Commercial temp; single- or dual-rank DIMM
DG	DY	Commercial temp; select dual-rank
I	IY	Industrial temp DIMM
T	TY	Industrial temp; select dual-rank DIMM

### SDR Modules

Module Speed	Allowable Component Speed	CL <sup>1</sup> -RCD <sup>1</sup> - <sup>1</sup> RP
-133	-6A, -75, -7E	3-3-3
-13E	-7E	2-2-2

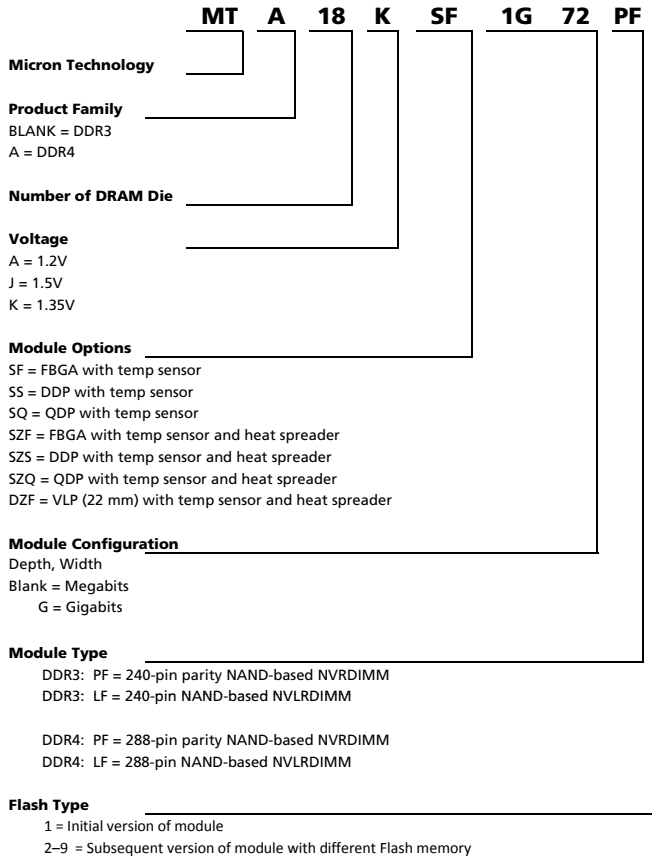
### DDR Modules

Module Speed	Allowable Component Speed
-335	-6, -6T, -5B
-40B	-5B

# DDR4/DDR3 NVDIMM Part Numbering System

The part numbering system is available at [www.micron.com/numbering](http://www.micron.com/numbering)

## DDR4/DDR3 SDRAM nonvolatile modules



**Z - 1G6 21 1 AA**

**Controller Type**

**Printed Circuit Board Revision**

**Die Revision**

**DDR4/DDR3 SDRAM Module Speed**

DRAM Technology	Module Speed Grade	Component Speed Grade/ Part Mark	JEDEC Component Speed Grade	Clock Freq. (MHz)	Data Rate (MT/s)	Module Bandwidth	Module Configuration SPD (CL- <sup>1</sup> RCD- <sup>1</sup> RP)
DDR4 SDRAM	-1G6	-125E	DDR4-1600	800	1600	PC4-1600	11-11-11
	-1G9	-107E	DDR4-1866	933	1866	PC4-1866	13-13-13
	-1S9	-107H	DDR4-1866	933	1866	PC4-1866	14-13-13
	-2G1	-093E	DDR4-2133	1067	2133	PC4-2133	15-15-15
	-2S1	-093H	DDR4-2133	1067	2133	PC4-2133	16-15-15
DDR3 SDRAM	-2G4	-083E	DDR4-2400	1200	2400	PC4-2400	16-16-16
	-1G1	-187E	DDR3-1066	533	1066	PC3-8500	7-7-7
	-1G4	-15E	DDR3-1333	667	1333	PC3-10600	9-9-9
	-1G6	-125	DDR3-1600	800	1600	PC3-12800	11-11-11
	-1G9	-107	DDR3-1866	933	1866	PC3-14900	13-13-13
-2G1	-093	DDR3-2133	1067	2133	PC3-17000	14-14-14	

SPD = serial presence-detect pin (module only)  
CL = CAS latency; <sup>1</sup>RCD = active-to-command time; <sup>1</sup>RP = precharge time

**Package Codes**

Pb-Free Devices	Package Descriptions
Z	Halogen-free; commercial temp; single-, dual-, quad- or octal-rank DIMM
DZ	Halogen-free; commercial temp; select dual-, quad- or octal-rank DIMM
IZ	Halogen-free; Industrial temp, commercial temp; single-, dual- or quad-rank DIMM
TZ	Halogen-free; Industrial temp; select dual- and quad-rank DIMM

