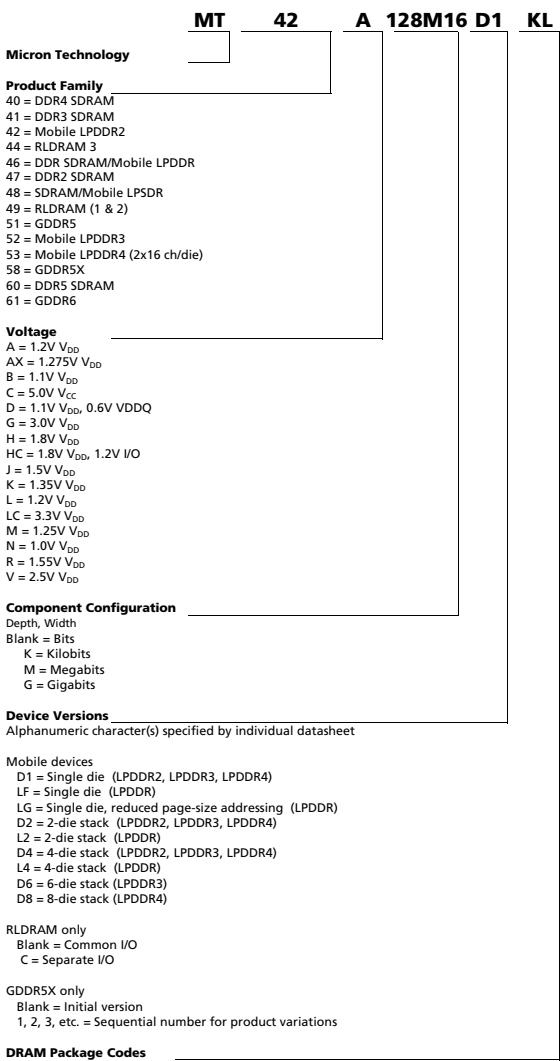


# DRAM Component Part Numbering System

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

**DDR5/DDR4/DDR3/DDR2/DDR/SDRAM, Mobile LPDDR4/LPDDR3/LPDDR2/LPDDR/LPSDR, RLD RAM® & GDDR6/GDDR5X/GDDR5 Memory**



**Die Revision Designator**

**Production Status**  
 ES = Engineering sample  
 MS = Mechanical sample  
 Blank = Production

**Operating Temperatures**  
 Blank = Commercial temperature  
 IT\* = Industrial temperature  
 AT = Automotive temperature  
 WT = Wireless temperature  
 XT = Wide temperature  
 UT = Ultra temperature  
 \*\*The number one (1) and the capital letter "I" utilize the same laser mark—"I"

**Special Options**  
 (Multiple processing codes are separated by a space and are listed in hierarchical order)  
 A = Automotive  
 G = Graphics  
 L = Low power  
 M = Reduced standby  
 X = Product Longevity Program (Automotive & Industrial only)

**Access/Cycle Time**

DRAM Technology	Speed Grade Mark	RAM Access Time
All DRAM	-0	Untested
	-A	Untested

DRAM Technology	Speed Grade Mark	MAX Clock Frequency	PC Targets CL <sup>1</sup> -RC <sup>2</sup> -RP	
<b>DDR4 SDRAM</b>	-093E	1067 MHz	15-15-15	
	-093H	1067 MHz	18-15-15	
	-083	1200 MHz	17-17-17	
	-083E	1200 MHz	16-16-16	
	-083H	1200 MHz	20-18-18	
	-083J	1200 MHz	19-17-17	
	-075	1333 MHz	19-19-19	
	-075E	1333 MHz	18-18-18	
	-075H	1333 MHz	22-19-19	
	-068	1467 MHz	21-21-21	
	-068E	1467 MHz	20-20-20	
	-062E	1600 MHz	22-22-22	
-062H	1600 MHz	26-22-22		
<b>DDR3 SDRAM</b>	-15E	667 MHz	9-9-9	
	-125	800 MHz	11-11-11	
	-125E	800 MHz	10-10-10	
	-107	933 MHz	13-13-13	
-093	1067 MHz	14-14-14		
<b>DDR2 SDRAM</b>	-3	333 MHz	5-5-5	
	-25	400 MHz	6-6-6	
	-25E	400 MHz	5-5-5	
	-187E	533 MHz	7-7-7	
<b>DDR SDRAM</b>	-75	133 MHz	2.5-3-3	
	-6T	167 MHz	2.5-3-3	
	-5B	200 MHz	3-3-3	
<b>SDRAM</b>	-75	133 MHz	3-3-3	
	-7E	133 MHz	2-2-2	
	-6A	167 MHz	3-3-3	
	-5	200 MHz	3-3-3	
	<b>Mobile LPDDR4</b>	-046	2133 MHz	
-053		1866 MHz		
-062		1600 MHz		
-075		1333 MHz		
-093		1066 MHz		
-125		800 MHz		
-125		800 MHz		
-18		533 MHz		
-375		266 MHz		
<b>Mobile LPDDR3</b>		-15	667 MHz	10-10-10
		-125	800 MHz	12-12-12
<b>Mobile LPDDR2</b>		-18	533 MHz	
	-25	400 MHz		
	-3	333 MHz		
	-37	266 MHz		
	-5	200 MHz		
<b>Mobile LPDDR</b>	-75	133 MHz		
	-6	167 MHz		
	-54	185 MHz		
	-5	200 MHz		
<b>Mobile LPSDR</b>	-48	208 MHz		
	-8	125 MHz		
	-75	133 MHz		
<b>RLDRAM 1 &amp; 2</b>	-6	167 MHz		
	-5	200 MHz		
	-33	300 MHz		
	-25	400 MHz with <sup>1</sup> RC 20ns		
<b>RLDRAM 3</b>	-25E	400 MHz with <sup>1</sup> RC 15ns		
	-18	533 MHz		
	-125	800 MHz with <sup>1</sup> RC (MIN) 12ns		
	-125E	800 MHz with <sup>1</sup> RC (MIN) 10ns		
	-107	933 MHz with <sup>1</sup> RC (MIN) 10ns		
	-107E	933 MHz with <sup>1</sup> RC (MIN) 8ns		
<b>GDDR5</b>	-093	1067 MHz with <sup>1</sup> RC (MIN) 10ns		
	-093E	1067 MHz with <sup>1</sup> RC (MIN) 8ns		
	-50	1.25 GHz	Data Rate	
	-60	1.5 GHz	5 Gb/s	
	-70	1.75 GHz	6 Gb/s	
<b>GDDR5X</b>	-80	2.0 GHz	7 Gb/s	
	-100	1.25 GHz	8 Gb/s	
	-110	1.375 GHz	Data Rate	
	-120	1.5 GHz	10 Gb/s	
<b>GDDR6</b>	-140	1.75 GHz	11 Gb/s	
	-10	1.25 GHz	12 Gb/s	
	-12	1.5 GHz	13 Gb/s	
	-13	1.625 GHz	14 Gb/s	
-14	1.75 GHz	14 Gb/s		

