## DRAM Part Decoder

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### SDRAM Product Family
- **41**: Asynchronous
- **42**: SDR Commercial/Industrial grade
- **43**: (LP)DDR/DDR2/DDR3/DDR4 Commercial/Industrial grade
- **45**: SDR Automotive grade
- **46**: (LP)DDR/DDR2/DDR3/DDR4 Automotive grade

### Operating Voltage Range
- **Asynchronous**: Fast Page & EDO
  - LV = 3.3V
- **Synchronous**: High Speed
  - S = 3.3V SDR
  - VS = 1.8V SDR
  - R = 2.5V DDR or 2.5V SDR
  - DR = DDR2
  - TR = DDR3
  - QR = DDR4
- **Low Power**
  - SM/VM = 3.3V/2.5V/1.8V mobile SDR
  - LR = 1.8V mobile DDR (LPDDR)
  - LD = LPDDR2
  - LQ = LPDDR4

### Bus Width
- **8** = x8
- **16** = x16
- **32** = x32

### No. of Words
- **100** = 1M
- **200** = 2M
- **128** = 128M
- **256** = 256M
- **512** = 512M
- K01 or 1024 = 1G

### Speed
- **-7** = up to 143Mhz
- **-6** = up to 166Mhz
- **-75E** = up to 133Mhz @ CL2 [SDR]
- **-5** = up to 200Mhz
- **-37** = up to 266Mhz
- **-3** = up to 333Mhz
- **-25** = up to 400Mhz
- **-187** or **-18** = up to 533Mhz
- **-15** = up to 667 Mhz [1333 Data Rate]
- **-125** = up to 800Mhz [1600 Data Rate]
- **-107** = up to 933Mhz [1866 Data Rate]
- **-093** = up to 1066Mhz [2133 Data Rate]
- **-083** = up to 1200Mhz [2400 Data Rate]
- **-075** = Up to 1333Mhz [2666 Data Rate]
- **-068** = Up to 1466Mhz [2933 Data Rate]
- **-062** = Up to 1600Mhz [3200 Data Rate]

### CAS Latency
- **B** = 3, **C** = 4, **D** = 5, **E** = 6,
- **F** = 7, **G** = 8, **H** = 9, **J** = 10,
- **K** = 11, **L** = 12, **M** = 13, **N** = 14,
- **P** = 15, **R** = 16, **T** = 17, **U** = 18
- **V** = 19, **Y** = 21, **AA** = 22

### CAS Latency ("Die Rev")
- [Blank] for some products, whereas only specific speed and CAS Latency combinations exist for others.

### Solder Type
- [Blank] = Sn/Pb
- **L** = 100% matte Sn for non-BGA or SnAgCu for BGA

### Temp. Grade
- **Blank** = Commercial Grade (0°C to +70°C)
- **I** = Industrial Grade (−40°C to +85°C)
- **A1** = Automotive Grade (−40°C to +85°C)
- **A2** = Automotive Grade (−40°C to +105°C)
- **A25** = Automotive Grade (−40°C to +115°C)
- **A3** = Automotive Grade (−40°C to +125°C)

### Package Type
- **B** = BGA
- **CT** = Copper TSOP
- **T** = TSOP
- **BP** = PoP BGA

### ISSI prefix
- **IS**
- **43**
- **TR**
- **8**
- **1280**
- **CL-107M**
- **BL**
- **I-TR**

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