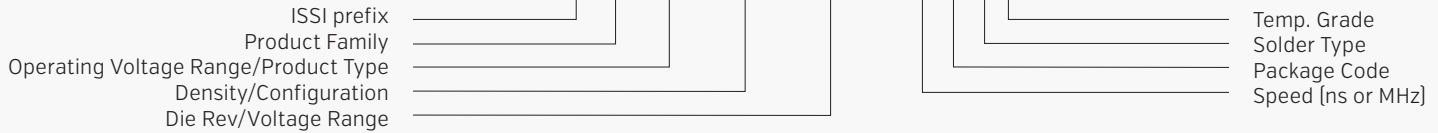


SRAM Part Decoder

IS 61 WV 12816 DBLL - 10 T L I



• SRAM Product Family

61/63 = High Speed
 62 = Low Power
 64 = Automotive High Speed
 65 = Automotive Low Power
 66 = Pseudo SRAM
 67 = Automotive PSRAM

• Density/Configuration

Example:
 25636 = 256Kx36
 51216 = 512Kx16
 1M36 = 1Mx36

• Die Rev/Voltage Range

Die Rev
 Blank-Z

Voltage Range [WV]
 ALL = 1.65V to 2.2V
 BLL = 2.5V to 3.6V

• Operating Voltage Range/ Product Type

Asynchronous SRAM
 C = 5V
 LV = 3.3V
 WV = Wide Voltage Range

Synchronous SRAM
 P = Pipeline, F = Flowthrough
 NLP/NLF/NVP/NVF = No-Wait Option
 LP/LF: Vcc = 3.3V, VccQ = 3.3V/2.5V
 VP/VF: Vcc = 2.5V, VccQ = 2.5V
 QD = QUAD, DD = DDR-II Common I/O: Vcc = 1.8V, VccQ = 1.8V/1.5V

• Temp. Grade

Blank = Commercial Grade [0C to +70°C]
 I = Industrial Grade [-40C to +85°C]
 A1 = Automotive Grade [-40C to +85°C]
 A2 = Automotive Grade [-40C to +105°C]
 A3 = Automotive Grade [-40C to +125°C]

• Solder Type

Blank = SnPb
 L = Lead-free [RoHS Compliant]

• Package Code

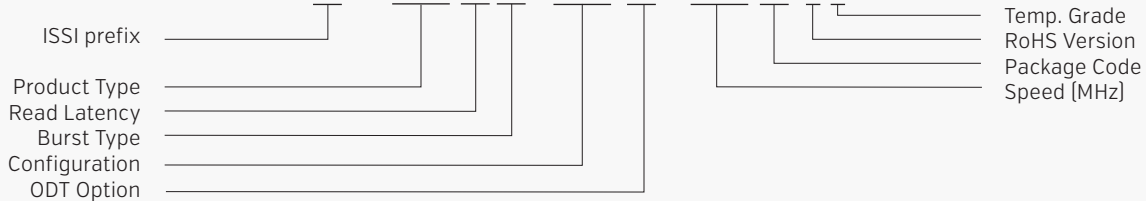
B, B1, B2, B3 = BGA
 CT = Copper TSOP
 H = sTSOP
 J = 300-mil SOJ
 K = 400-mil SOJ
 LQ = LQFP
 M, M3, = BGA
 Q = SOP
 T/T2 = TSOP
 TQ = TQFP
 U = SOP

• Speed [ns or MHz]

Example:
 8 = 8ns
 200 = 200MHz

QUAD/P, DDR-II/P Part Decoder

IS 61 QDP 2 B4 4M18 A1 - 333 M3 L I



• Product Type

QD = QUAD
 QDP = QUADP
 DD = DDR-II, Common I/O
 DDP = DDR-IIP, Common I/O

• Configuration

51236 = 512Kb x 36
 1M18 = 1Mb x 18
 1M36 = 1Mb x 36
 2M18 = 2Mb x 18
 2M36 = 2Mb x 36
 4M18 = 4Mb x 18

• Read Latency (RL):

For QUAD/DDR-II devices:
 Blank = 1.5 clock cycles
For QUADP/DDR-IIP devices:
 Blank = 2.5 clock cycles
 2 = 2.0 clock cycles

• Burst Type:

B2 = Burst 2
 B4 = Burst 4

• ODT Option (if supported):

A: No ODT
 A1: ODT Option 1
 If ODT = HIGH or floating, a high range termination resistance is selected.
 If ODT = LOW, a low range termination resistance is selected.
 A2: ODT Option 2
 If ODT = HIGH, a high range termination resistance is selected.
 If ODT = LOW or floating, ODT is disabled

• Speed

Example: 250 = 250MHz

• Package Code

B4 = 165 ball BGA [13 x 15 mm]
 M3 = 165-ball BGA [15 x 17 mm]

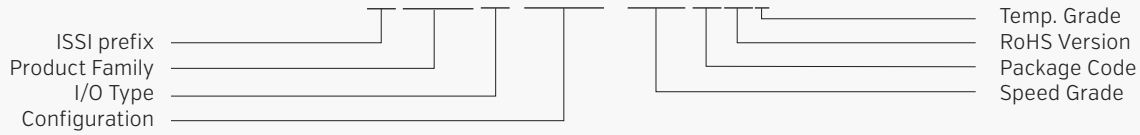
• RoHS Version

Blank = Leaded
 L = Lead-free

• Temperature Range

Blank = Commercial [0C to 70°C]
 I = Industrial [-40C to 85°C]

IS49NL C 36800 - 25E B L I



• **Product Family:**

49NL = RLDRAM*2
49RL = RLDRAM*3

• **I/O Type:**

C = Common I/O
S = Separate I/O
Blank = RLDRAM*3

• **Configuration**

288Mb
93200 = 32M x 9
18160 = 16M x 18
36800 = 8M x 36
576Mb
96400 = 64M x 9
18320 = 32M x 18 or 2M x 18 x 16 banks
36160 = 16M x 36 or 1M x 36 x 16 banks
1Gb
18640 = 64M x 18
36320 = 32M x 36

• **Speed Grade:**

25E - tCK = 2.5ns; tRC = 15ns
25 - tCK = 2.5ns; tRC = 20ns
33 - tCK = 3.3ns; tRC = 20ns
5 - tCK = 5ns; tRC = 20ns
093E - tCK = 0.93ns; tRC = 8ns
093 - tCK = 0.93ns; tRC = 10ns
107E - tCK = 1.07ns; tRC = 8ns
107 - tCK = 1.07ns; tRC = 10ns
125F - tCK = 1.25ns; tRC = 8ns
125E - tCK = 1.25ns; tRC = 10ns
125 - tCK = 1.25ns; tRC = 12ns

• **Package Code:**

B = 168-ball FBGA [RLDRAM*3]
B = 144-ball FBGA [RLDRAM*2]

• **RoHS Version:**

Blank = SnPb
L = Lead-free [RoHS compliant]

• **Temperature Range:**

Blank = Commercial [0C to 70°C]
I = Industrial [-40C to 85°C]