



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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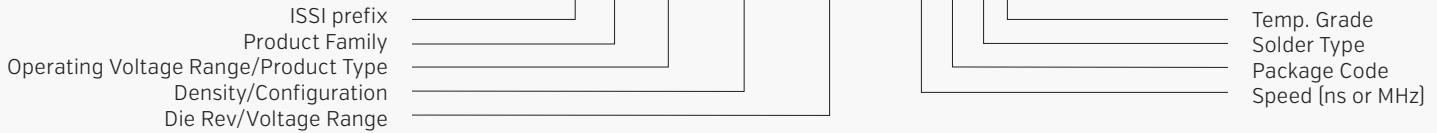
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## SRAM Part Decoder

### 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

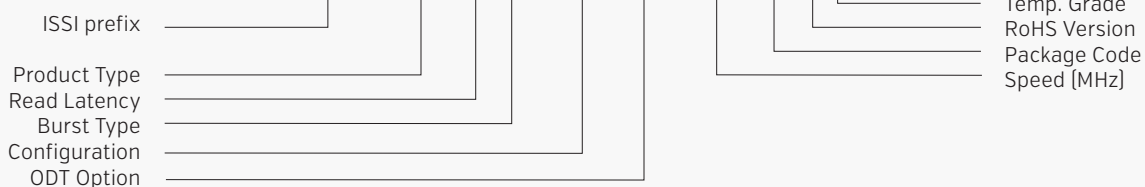
B, B1, B2, B3 = BGA  
 CT = Copper TSOP  
 H = sTSOP  
 J = 300-mil SOJ  
 K = 400-mil SOJ  
 LQ = LQFP  
 M, M3, = BGA  
 Q = SOP  
 T/T2 = TSOP  
 TQ = TQFP  
 U = SOP

#### • 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]