



#### REVISION HISTORY

| <u>Revision</u> | <u>Description</u>   | <u>Issue Date</u> |
|-----------------|--|-------------------|
| Rev. 1.0        | Initial Issue  | Apr.19.2006       |
| Rev. 2.0        | Revised $I_{SB(max)}$ : 0.5mA => 1.25mA  | May.11.2006       |
| Rev. 2.1        | Adding 44-pin TSOP-II  | Jul.5.2006        |
| Rev. 2.2        | Adding 48-ball BGA   | Dec.20.2006       |
| Rev. 2.3        | Revised $I_{DR}$<br>Deleted L Spec.<br>Added SL Spec.<br>Revised Test Condition of $I_{CC}/I_{SB1}/I_{DR}$<br>Revised $V_{TERM}$ to $V_{T1}$ and $V_{T2}$  | Mar.3.2008        |
| Rev. 2.4        | Added $I_{SB1}/I_{DR}$ values when $T_A = 25^{\circ}C$ and $T_A = 40^{\circ}C$<br>Revised <b>FEATURES &amp; ORDERING INFORMATION</b> <b>Lead free and green package available</b> to <b>Green package available</b><br>Added packing type in <b>ORDERING INFORMATION</b><br>Deleted $T_{SOLDER}$ in <b>ABSOLUTE MAXIMUM RATINGS</b>  | Mar.30.2009       |
| Rev. 2.5        | Revised <b>PACKAGE OUTLINE DIMENSION</b> in page 13  | May.6.2010        |
| Rev. 2.6        | Revised <b>ORDERING INFORMATION</b> in page 14   | Aug.30.2010       |
| Rev. 2.7        | Corrected <b>ORDERING INFORMATION</b> Typo.  | May.20.2016       |
| Rev. 2.8        | Deleted <b>WRITE CYCLE</b> Notes :   | Jun.29.2016       |
| Rev. 3.0        | 1. WE#, CE# must be high or CE2 must be low during all address transitions in page 9<br>1. Deleted <b>FEATURES</b> Standby current : 1 $\mu$ A (TYP.) SL-version--Page 1<br>2. Deleted <b>PRODUCT FAMILY</b> Standby( $I_{SB1}$ , TYP.) : 1 $\mu$ A(SL)--- Page 1<br>3. Deleted <b>DC ELECTRICAL CHARACTERISTICS</b> : Standby Power Supply Current : $I_{SB1}$ --- Page4<br>4. Deleted <b>DC ELECTRICAL CHARACTERISTICS</b> : Notes: 5--- Page 4<br>5. Deleted <b>DATA RETENTION CHARACTERISTICS</b> : Data Retention Current: $I_{DR}$ --- Page 10<br>6. Revised <b>ORDERING INFORMATION</b> in Page 13~Page18 | Jun.18.2024       |

### FEATURES

- Fast access time : 45/55/70ns
- Low power consumption:  
Operating current : 40/30/20mA (TYP.)  
Standby current : 2 $\mu$ A (TYP.) LL-version
- Single 2.7V ~ 3.6V power supply
- All inputs and outputs TTL compatible
- Fully static operation
- Tri-state output
- Data byte control : LB# (DQ0 ~ DQ7)  
UB# (DQ8 ~ DQ15)
- Data retention voltage : 1.5V (MIN.)
- **Green package available**
- Package : 44-pin 400 mil TSOP II  
48-pin 12mm x 20mm TSOP I  
48-ball 6mm x 8mm TFBGA

### GENERAL DESCRIPTION

The LY62L25716 is a 4,194,304-bit low power CMOS static random access memory organized as 262,144 words by 16 bits. It is fabricated using very high performance, high reliability CMOS technology. Its standby current is stable within the range of operating temperature.

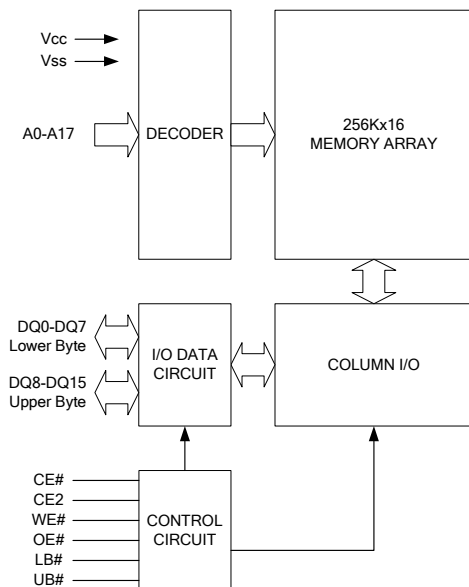
The LY62L25716 is well designed for low power application, and particularly well suited for battery back-up nonvolatile memory application.

The LY62L25716 operates from a single power supply of 2.7V ~ 3.6V and all inputs and outputs are fully TTL compatible

### PRODUCT FAMILY

| Product Family | Operating Temperature | Vcc Range  | Speed      | Power Dissipation  |                     |
|----------------|-----------------------|------------|------------|--------------------|---------------------|
|                |                       |            |            | Standby(Isb1,TYP.) | Operating(Icc,TYP.) |
| LY62L25716     | 0 ~ 70°C              | 2.7 ~ 3.6V | 45/55/70ns | 2 $\mu$ A(LL)      | 40/30/20mA          |
| LY62L25716(E)  | -20 ~ 80°C            | 2.7 ~ 3.6V | 45/55/70ns | 2 $\mu$ A(LL)      | 40/30/20mA          |
| LY62L25716(I)  | -40 ~ 85°C            | 2.7 ~ 3.6V | 45/55/70ns | 2 $\mu$ A(LL)      | 40/30/20mA          |

### FUNCTIONAL BLOCK DIAGRAM

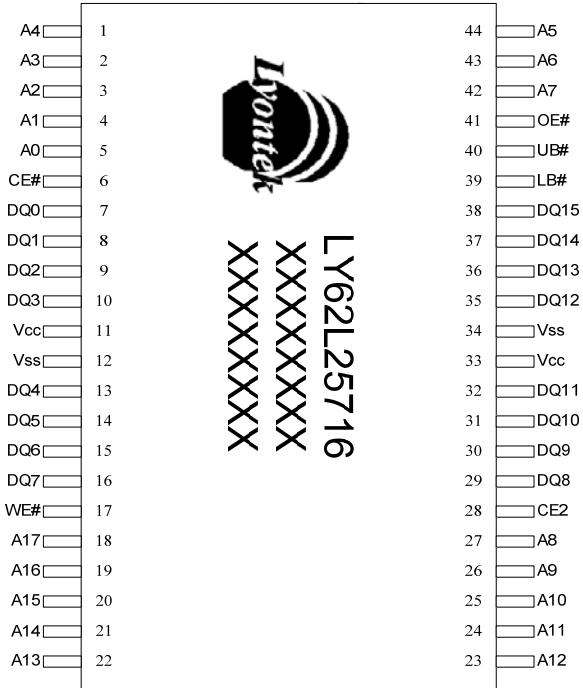


### PIN DESCRIPTION

| SYMBOL     | DESCRIPTION         |
|------------|---------------------|
| A0 - A17   | Address Inputs      |
| DQ0 - DQ15 | Data Inputs/Outputs |
| CE#, CE2   | Chip Enable Input   |
| WE#        | Write Enable Input  |
| OE#        | Output Enable Input |
| LB#        | Lower Byte Control  |
| UB#        | Upper Byte Control  |
| Vcc        | Power Supply        |
| Vss        | Ground              |



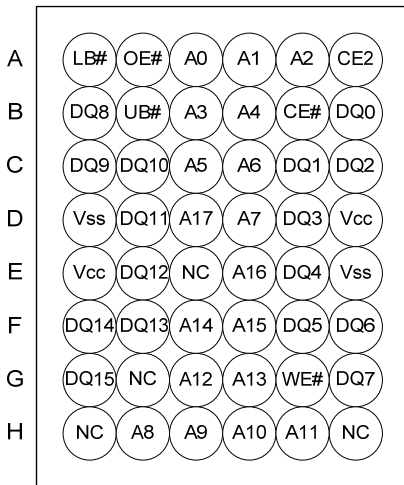
### PIN CONFIGURATION



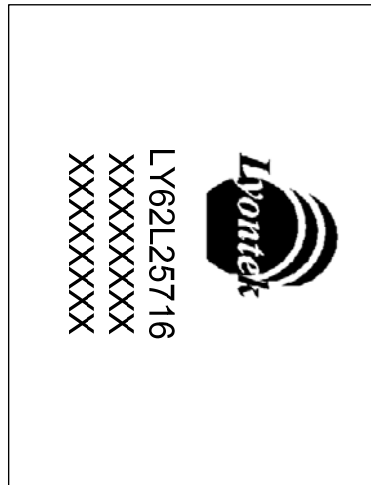
TSOP II



TSOP I



1 2 3 4 5 6  
TFBGA(See through with Top View)



TFBGA(Top View)

**ABSOLUTE MAXIMUM RATINGS\***

| PARAMETER                                | SYMBOL           | RATING                       | UNIT |
|--|------------------|------------------------------|------|
| Voltage on Vcc relative to Vss           | V <sub>T1</sub>  | -0.5 to 4.6                  | V    |
| Voltage on any other pin relative to Vss | V <sub>T2</sub>  | -0.5 to V <sub>CC</sub> +0.5 | V    |
| Operating Temperature                    | T <sub>A</sub>   | 0 to 70(C grade)             | °C   |
|  |                  | -20 to 80(E grade)           |      |
|  |                  | -40 to 85(I grade)           |      |
| Storage Temperature                      | T <sub>STG</sub> | -65 to 150                   | °C   |
| Power Dissipation                        | P <sub>D</sub>   | 1                            | W    |
| DC Output Current                        | I <sub>OUT</sub> | 50                           | mA   |

\*Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to the absolute maximum rating conditions for extended period may affect device reliability.

**TRUTH TABLE**

| MODE           | CE# | CE2 | OE# | WE# | LB# | UB# | I/O OPERATION    |                  | SUPPLY CURRENT                     |
|----------------|-----|-----|-----|-----|-----|-----|------------------|------------------|------------------------------------|
|                |     |     |     |     |     |     | DQ0-DQ7          | DQ8-DQ15         |                                    |
| Standby        | H   | X   | X   | X   | X   | X   | High - Z         | High - Z         | I <sub>SB</sub> , I <sub>SB1</sub> |
|                | X   | L   | X   | X   | X   | X   | High - Z         | High - Z         |                                    |
|                | X   | X   | X   | X   | H   | H   | High - Z         | High - Z         |                                    |
| Output Disable | L   | H   | H   | H   | L   | X   | High - Z         | High - Z         | I <sub>CC</sub> , I <sub>CC1</sub> |
|                | L   | H   | H   | H   | X   | L   | High - Z         | High - Z         |                                    |
| Read           | L   | H   | L   | H   | L   | H   | D <sub>OUT</sub> | High - Z         | I <sub>CC</sub> , I <sub>CC1</sub> |
|                | L   | H   | L   | H   | H   | L   | High - Z         | D <sub>OUT</sub> |                                    |
|                | L   | H   | L   | H   | L   | L   | D <sub>OUT</sub> | D <sub>OUT</sub> |                                    |
| Write          | L   | H   | X   | L   | L   | H   | D <sub>IN</sub>  | High - Z         | I <sub>CC</sub> , I <sub>CC1</sub> |
|                | L   | H   | X   | L   | H   | L   | High - Z         | D <sub>IN</sub>  |                                    |
|                | L   | H   | X   | L   | L   | L   | D <sub>IN</sub>  | D <sub>IN</sub>  |                                    |

Note: H = V<sub>IH</sub>, L = V<sub>IL</sub>, X = Don't care.



### DC ELECTRICAL CHARACTERISTICS

| PARAMETER                              | SYMBOL                        | TEST CONDITION   | MIN.    | TYP.*4 | MAX.                 | UNIT |    |
|--|-------------------------------|--|---------|--------|----------------------|------|----|
| Supply Voltage                         | V <sub>CC</sub>               |  | 2.7     | 3.0    | 3.6                  | V    |    |
| Input High Voltage                     | V <sub>IH</sub> <sup>*1</sup> |  | 2.2     | -      | V <sub>CC</sub> +0.3 | V    |    |
| Input Low Voltage                      | V <sub>IL</sub> <sup>*2</sup> |  | - 0.2   | -      | 0.6                  | V    |    |
| Input Leakage Current                  | I <sub>LI</sub>               | V <sub>CC</sub> ≥ V <sub>IN</sub> ≥ V <sub>SS</sub>  | - 1     | -      | 1                    | μA   |    |
| Output Leakage Current                 | I <sub>LO</sub>               | V <sub>CC</sub> ≥ V <sub>OUT</sub> ≥ V <sub>SS</sub> ,<br>Output Disabled  | - 1     | -      | 1                    | μA   |    |
| Output High Voltage                    | V <sub>OH</sub>               | I <sub>OH</sub> = -1mA   | 2.2     | 2.7    | -                    | V    |    |
| Output Low Voltage                     | V <sub>OL</sub>               | I <sub>OL</sub> = 2mA  | -       | -      | 0.4                  | V    |    |
| Average Operating Power supply Current | I <sub>CC</sub>               | Cycle time = Min.<br>CE# = V <sub>IL</sub> and CE2 = V <sub>IH</sub> ,<br>I <sub>I/O</sub> = 0mA<br>Other pins at V <sub>IL</sub> or V <sub>IH</sub> | - 45    | -      | 40                   | 50   | mA |
|  |                               |  | - 55    | -      | 30                   | 40   | mA |
|  |                               |  | - 70    | -      | 20                   | 30   | mA |
|  | I <sub>CC1</sub>              | Cycle time = 1μs<br>CE# ≤ 0.2V and CE2 ≥ V <sub>CC</sub> -0.2V,,<br>I <sub>I/O</sub> = 0mA<br>Other pins at 0.2V or V <sub>CC</sub> -0.2V            | -       | 4      | 5                    | mA   |    |
| Standby Power Supply Current           | I <sub>SB</sub>               | CE# = V <sub>IH</sub> or CE2 = V <sub>IL</sub> ,<br>other pins at V <sub>IL</sub> or V <sub>IH</sub>   | -       | 0.3    | 1.25                 | mA   |    |
|  | I <sub>SB1</sub>              | CE# ≥ V <sub>CC</sub> -0.2V<br>or CE2 ≤ 0.2V<br>Others at 0.2V or<br>V <sub>CC</sub> - 0.2V  | LL      | -      | 2                    | 15   | μA |
|  |                               |  | LLE/LLI | -      | 2                    | 20   | μA |

**Notes:**

- V<sub>IH</sub>(max) = V<sub>CC</sub> + 3.0V for pulse width less than 10ns.
- V<sub>IL</sub>(min) = V<sub>SS</sub> - 3.0V for pulse width less than 10ns.
- Over/Undershoot specifications are characterized, not 100% tested.
- Typical values are included for reference only and are not guaranteed or tested.  
Typical values are measured at V<sub>CC</sub> = V<sub>CC</sub>(TYP.) and T<sub>A</sub> = 25°C

**CAPACITANCE** ( $T_A = 25^\circ\text{C}$ ,  $f = 1.0\text{MHz}$ )

| PARAMETER                | SYMBOL    | MIN. | MAX | UNIT |
|--------------------------|-----------|------|-----|------|
| Input Capacitance        | $C_{IN}$  | -    | 6   | pF   |
| Input/Output Capacitance | $C_{I/O}$ | -    | 8   | pF   |

Note : These parameters are guaranteed by device characterization, but not production tested.

**AC TEST CONDITIONS**

|  |  |
|--|--|
| Input Pulse Levels                       | 0.2V to $V_{CC} - 0.2\text{V}$   |
| Input Rise and Fall Times                | 3ns  |
| Input and Output Timing Reference Levels | 1.5V   |
| Output Load                              | $C_L = 30\text{pF} + 1\text{TTL}$ , $I_{OH}/I_{OL} = -1\text{mA}/2\text{mA}$ |

**AC ELECTRICAL CHARACTERISTICS****(1) READ CYCLE**

| PARAMETER                          | SYM.        | LY62L25716-45 |      | LY62L25716-55 |      | LY62L25716-70 |      | UNIT |
|------------------------------------|-------------|---------------|------|---------------|------|---------------|------|------|
|                                    |             | MIN.          | MAX. | MIN.          | MAX. | MIN.          | MAX. |      |
| Read Cycle Time                    | $t_{RC}$    | 45            | -    | 55            | -    | 70            | -    | ns   |
| Address Access Time                | $t_{AA}$    | -             | 45   | -             | 55   | -             | 70   | ns   |
| Chip Enable Access Time            | $t_{ACE}$   | -             | 45   | -             | 55   | -             | 70   | ns   |
| Output Enable Access Time          | $t_{OE}$    | -             | 25   | -             | 30   | -             | 35   | ns   |
| Chip Enable to Output in Low-Z     | $t_{CLZ}^*$ | 10            | -    | 10            | -    | 10            | -    | ns   |
| Output Enable to Output in Low-Z   | $t_{OLZ}^*$ | 5             | -    | 5             | -    | 5             | -    | ns   |
| Chip Disable to Output in High-Z   | $t_{CHZ}^*$ | -             | 15   | -             | 20   | -             | 25   | ns   |
| Output Disable to Output in High-Z | $t_{OHZ}^*$ | -             | 15   | -             | 20   | -             | 25   | ns   |
| Output Hold from Address Change    | $t_{OH}$    | 10            | -    | 10            | -    | 10            | -    | ns   |
| LB#, UB# Access Time               | $t_{BA}$    | -             | 45   | -             | 55   | -             | 70   | ns   |
| LB#, UB# to High-Z Output          | $t_{BHZ}^*$ | -             | 20   | -             | 25   | -             | 30   | ns   |
| LB#, UB# to Low-Z Output           | $t_{BLZ}^*$ | 10            | -    | 10            | -    | 10            | -    | ns   |

**(2) WRITE CYCLE**

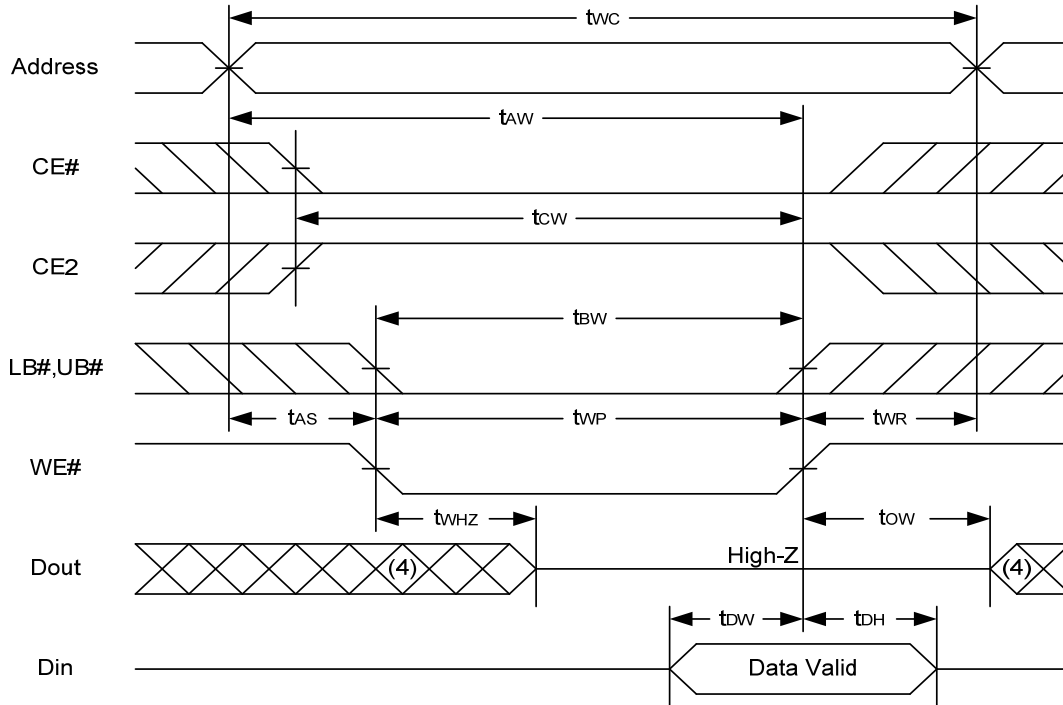
| PARAMETER                        | SYM.        | LY62L25716-45 |      | LY62L25716-55 |      | LY62L25716-70 |      | UNIT |
|----------------------------------|-------------|---------------|------|---------------|------|---------------|------|------|
|                                  |             | MIN.          | MAX. | MIN.          | MAX. | MIN.          | MAX. |      |
| Write Cycle Time                 | $t_{WC}$    | 45            | -    | 55            | -    | 70            | -    | ns   |
| Address Valid to End of Write    | $t_{AW}$    | 40            | -    | 50            | -    | 60            | -    | ns   |
| Chip Enable to End of Write      | $t_{CW}$    | 40            | -    | 50            | -    | 60            | -    | ns   |
| Address Set-up Time              | $t_{AS}$    | 0             | -    | 0             | -    | 0             | -    | ns   |
| Write Pulse Width                | $t_{WP}$    | 35            | -    | 45            | -    | 55            | -    | ns   |
| Write Recovery Time              | $t_{WR}$    | 0             | -    | 0             | -    | 0             | -    | ns   |
| Data to Write Time Overlap       | $t_{DW}$    | 20            | -    | 25            | -    | 30            | -    | ns   |
| Data Hold from End of Write Time | $t_{DH}$    | 0             | -    | 0             | -    | 0             | -    | ns   |
| Output Active from End of Write  | $t_{OW}^*$  | 5             | -    | 5             | -    | 5             | -    | ns   |
| Write to Output in High-Z        | $t_{WHZ}^*$ | -             | 15   | -             | 20   | -             | 25   | ns   |
| LB#, UB# Valid to End of Write   | $t_{BW}$    | 35            | -    | 45            | -    | 60            | -    | ns   |

\*These parameters are guaranteed by device characterization, but not production tested.

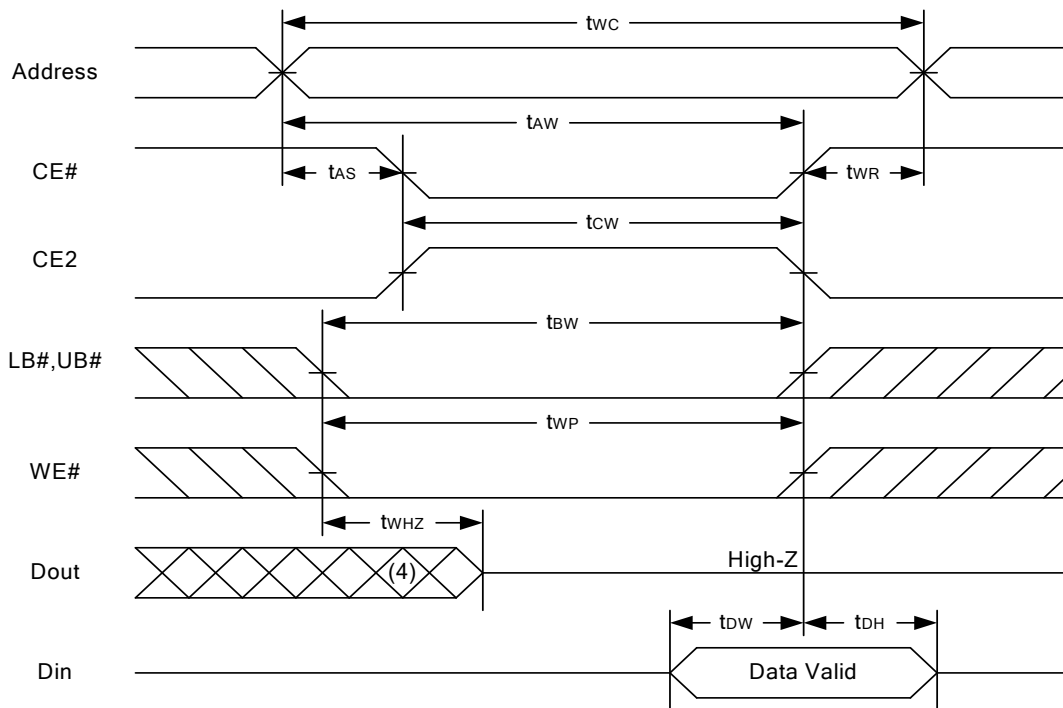




#### WRITE CYCLE 1 (WE# Controlled) (1,2,4,5)



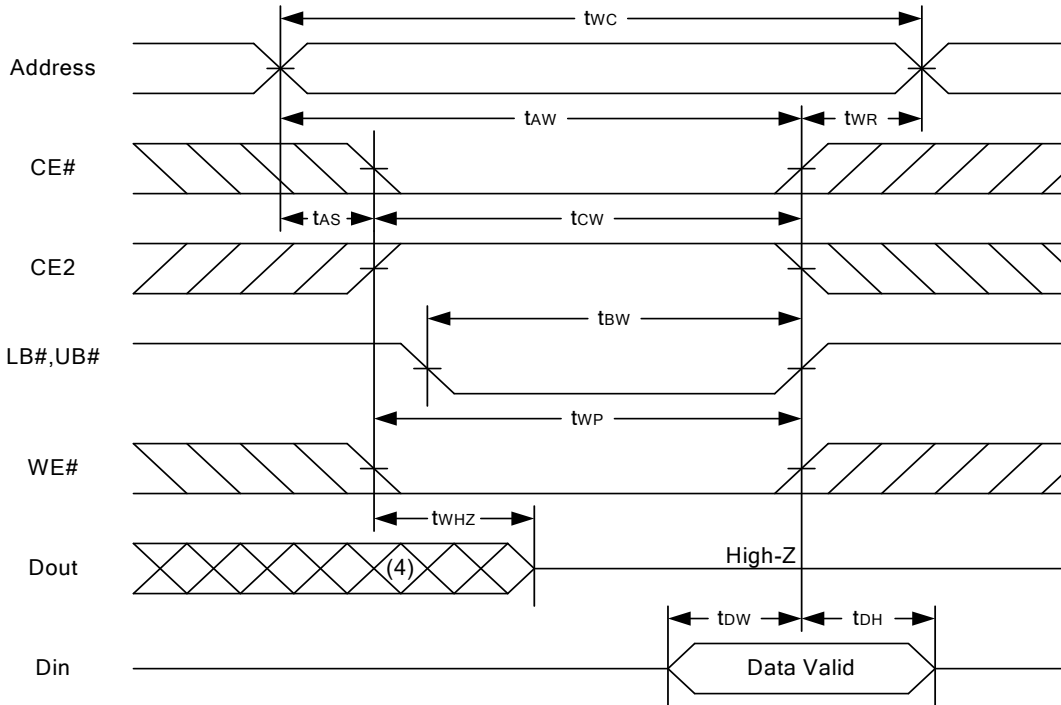
#### WRITE CYCLE 2 (CE# and CE2 Controlled) (1,4,5)







#### WRITE CYCLE 3 (LB#,UB# Controlled) (1,4,5)



Notes :

1. A write occurs during the overlap of a low CE#, high CE2, low WE#, LB# or UB# = low.
2. During a WE# controlled write cycle with OE# low,  $t_{wp}$  must be greater than  $t_{whz} + t_{dw}$  to allow the drivers to turn off and data to be placed on the bus.
3. During this period, I/O pins are in the output state, and input signals must not be applied.
4. If the CE#, LB#, UB# low transition and CE2 high transition occurs simultaneously with or after WE# low transition, the outputs remain in a high impedance state.
5.  $t_{ow}$  and  $t_{whz}$  are specified with  $C_L = 5\text{pF}$ . Transition is measured  $\pm 500\text{mV}$  from steady state.



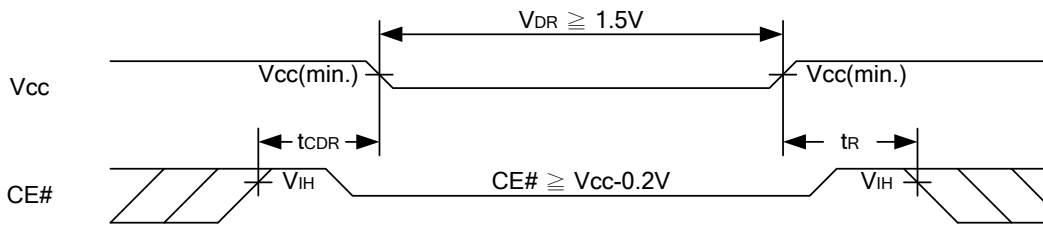
### DATA RETENTION CHARACTERISTICS

| PARAMETER                           | SYMBOL           | TEST CONDITION   | MIN.              | TYP. | MAX. | UNIT |    |
|-------------------------------------|------------------|--|-------------------|------|------|------|----|
| VCC for Data Retention              | V <sub>DR</sub>  | CE# ≥ V <sub>CC</sub> - 0.2V or CE2 ≤ 0.2V   | 1.5               | -    | 3.6  | V    |    |
| Data Retention Current              | I <sub>DR</sub>  | V <sub>CC</sub> = 1.5V<br>CE# ≥ V <sub>CC</sub> - 0.2V<br>or CE2 ≤ 0.2V<br>Other pins at 0.2V or V <sub>CC</sub> -0.2V | LL                | -    | 1.0  | 12   | μA |
|                                     |                  |  | LLE/LLI           | -    | 1.0  | 16   | μA |
| Chip Disable to Data Retention Time | t <sub>CDR</sub> | See Data Retention Waveforms (below)   | 0                 | -    | -    | ns   |    |
| Recovery Time                       | t <sub>R</sub>   |  | t <sub>RC</sub> * | -    | -    | ns   |    |

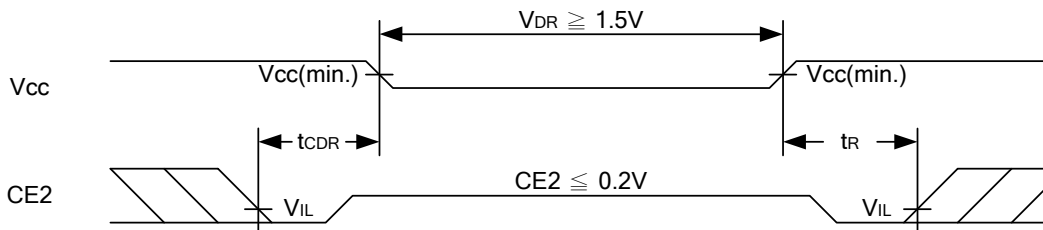
t<sub>RC</sub>\* = Read Cycle Time

### DATA RETENTION WAVEFORM

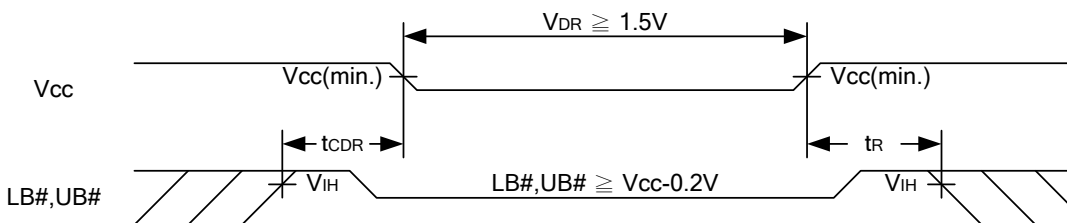
**Low Vcc Data Retention Waveform (1) (CE# controlled)**



**Low Vcc Data Retention Waveform (2) (CE2 controlled)**



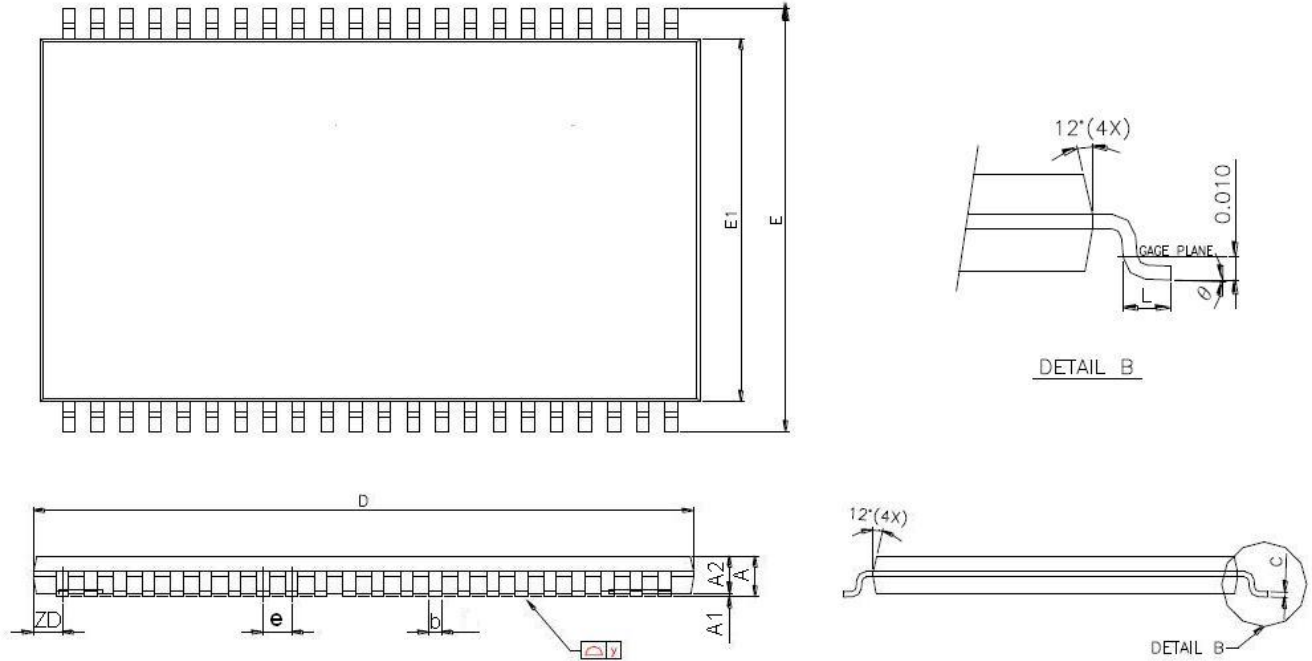
**Low Vcc Data Retention Waveform (3) (LB#, UB# controlled)**





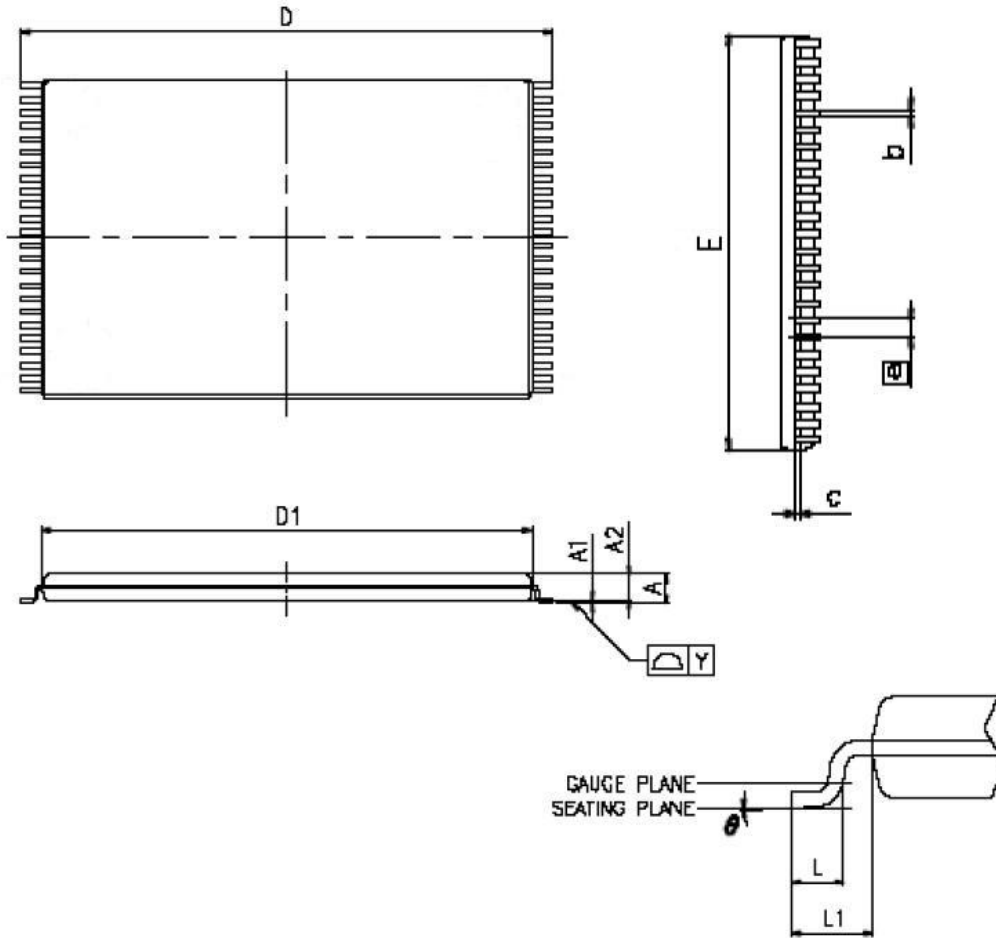
**PACKAGE OUTLINE DIMENSION**

**44-pin 400mil TSOP II Package Outline Dimension**



| SYMBOLS | DIMENSIONS IN MILLMETERS |        |        | DIMENSIONS IN MILS |      |      |
|---------|--------------------------|--------|--------|--------------------|------|------|
|         | MIN.                     | NOM.   | MAX.   | MIN.               | NOM. | MAX. |
| A       | -                        | -      | 1.20   | -                  | -    | 47.2 |
| A1      | 0.05                     | 0.10   | 0.15   | 2.0                | 3.9  | 5.9  |
| A2      | 0.95                     | 1.00   | 1.05   | 37.4               | 39.4 | 41.3 |
| b       | 0.30                     | -      | 0.45   | 11.8               | -    | 17.7 |
| c       | 0.12                     | -      | 0.21   | 4.7                | -    | 8.3  |
| D       | 18.212                   | 18.415 | 18.618 | 717                | 725  | 733  |
| E       | 11.506                   | 11.760 | 12.014 | 453                | 463  | 473  |
| E1      | 9.957                    | 10.160 | 10.363 | 392                | 400  | 408  |
| e       | -                        | 0.800  | -      | -                  | 31.5 | -    |
| L       | 0.40                     | 0.50   | 0.60   | 15.7               | 19.7 | 23.6 |
| ZD      | -                        | 0.805  | -      | -                  | 31.7 | -    |
| y       | -                        | -      | 0.076  | -                  | -    | 3    |
| θ       | 0°                       | 3°     | 6°     | 0°                 | 3°   | 6°   |

#### 48-pin 12mm x 20mm TSOP I Package Outline Dimension



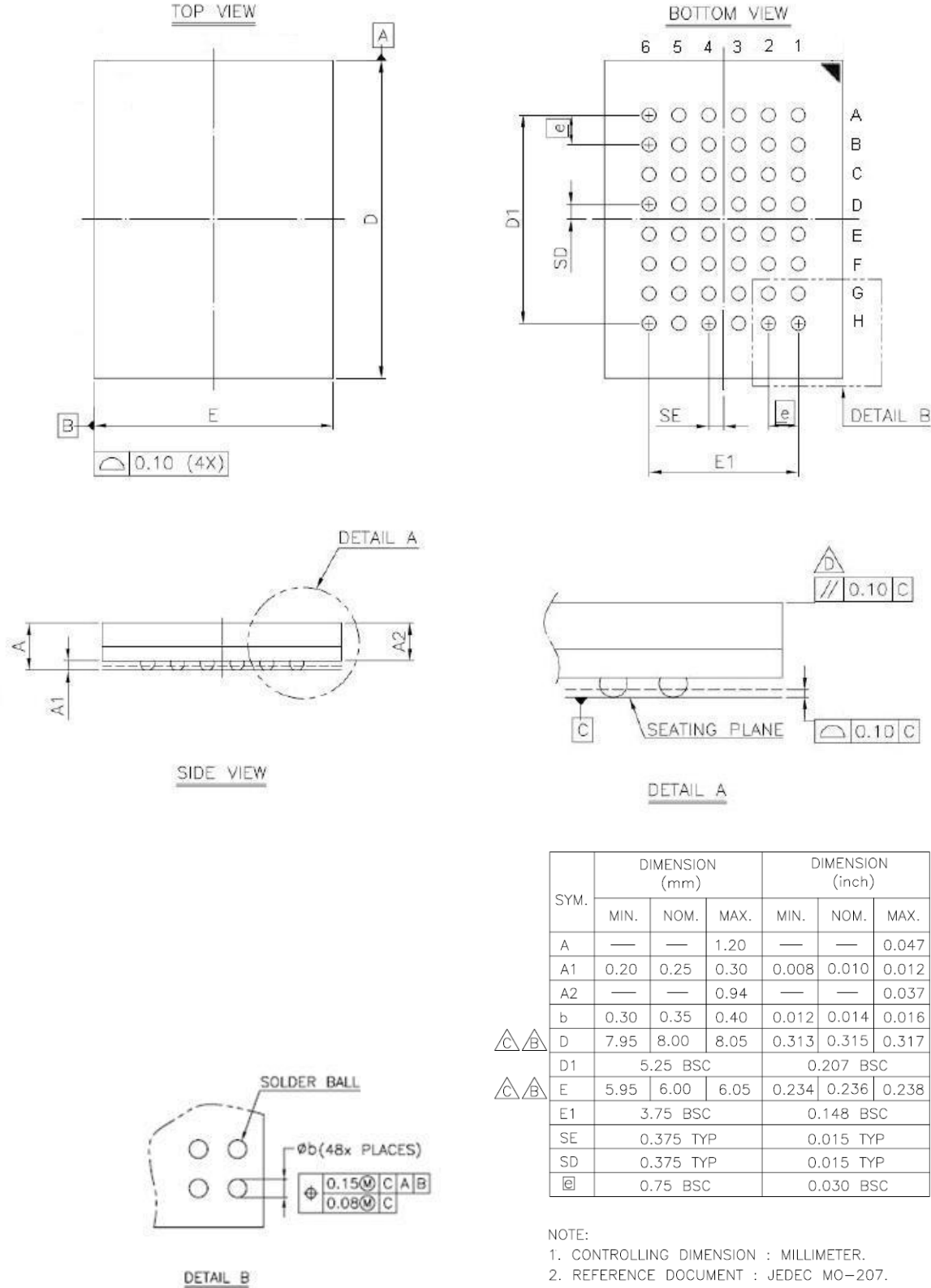
#### VARIATIONS (ALL DIMENSIONS SHOWN IN MM)

| SYMBOLS   | MIN.       | NOM.  | MAX   |
|-----------|------------|-------|-------|
| A         | -          | -     | 1.20  |
| A1        | 0.05       | -     | 0.15  |
| A2        | 0.95       | 1.00  | 1.05  |
| b         | 0.17       | 0.22  | 0.27  |
| c         | 0.10       | -     | 0.21  |
| D         | 19.80      | 20.00 | 20.20 |
| D1        | 18.30      | 18.40 | 18.50 |
| E         | 11.90      | 12.00 | 12.10 |
| $\square$ | 0.50 BASIC |       |       |
| L         | 0.50       | 0.60  | 0.70  |
| L1        | -          | 0.80  | -     |
| Y         | -          | -     | 0.10  |
| $\theta$  | $\theta$   | -     | 5°    |

#### NOTES:

- 1 JEDEC OUTLINE : MO-142 DD
2. PROFILE TOLERANCE ZONES FOR D1 AND E DO NOT INCLUDE MOLD PROTRUSION. ALLOWABLE MOLD PROTRUSION ON E IS 0.15mm PER SIDE AND ON D1 IS 0.25mm PER SIDE.
3. DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08mm TOTAL IN EXCESS OF THE b DIMENSION AT MAXIMUM MATERIAL CONDITION. DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OR THE FOOT.

#### 48-ball 6mm x 8mm TFBGA Package Outline Dimension





#### ORDERING INFORMATION

[Production Status: M/P]

| Package Type             | Access Time (Speed)(ns) | Power Type         | Temperature Range(°C) | Packing Type | Lyontek Item No.    |
|--------------------------|-------------------------|--------------------|-----------------------|--------------|---------------------|
| 44Pin(400mil)<br>TSOP II | 45                      | Ultra<br>Low Power | 0°C~70°C              | Tray         | LY62L25716ML-45LL   |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-45LLT  |
|                          |                         |                    | -20°C~80°C            | Tray         | LY62L25716ML-45LLE  |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-45LLET |
|                          |                         |                    | -40°C~85°C            | Tray         | LY62L25716ML-45LLI  |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-45LLIT |
|                          | 55                      | Ultra<br>Low Power | 0°C~70°C              | Tray         | LY62L25716ML-55LL   |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-55LLT  |
|                          |                         |                    | -20°C~80°C            | Tray         | LY62L25716ML-55LLE  |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-55LLET |
|                          |                         |                    | -40°C~85°C            | Tray         | LY62L25716ML-55LLI  |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-55LLIT |
|                          | 70                      | Ultra<br>Low Power | 0°C~70°C              | Tray         | LY62L25716ML-70LL   |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-70LLT  |
|                          |                         |                    | -20°C~80°C            | Tray         | LY62L25716ML-70LLE  |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-70LLET |
|                          |                         |                    | -40°C~85°C            | Tray         | LY62L25716ML-70LLI  |
|                          |                         |                    |                       | Tape Reel    | LY62L25716ML-70LLIT |



#### ORDERING INFORMATION

[Production Status: M/P]

| Package Type                  | Access Time (Speed)(ns) | Power Type         | Temperature Range(°C) | Packing Type        | Lyontek Item No.    |
|-------------------------------|-------------------------|--------------------|-----------------------|---------------------|---------------------|
| 48-Pin<br>12mmx20mm<br>TSOP I | 45                      | Ultra<br>Low Power | 0°C~70°C              | Tray                | LY62L25716LL-45LL   |
|                               |                         |                    |                       | Tape Reel           | LY62L25716LL-45LLT  |
|                               |                         |                    | -20°C~80°C            | Tray                | LY62L25716LL-45LLE  |
|                               |                         |                    |                       | Tape Reel           | LY62L25716LL-45LLET |
|                               |                         |                    | -40°C~85°C            | Tray                | LY62L25716LL-45LLI  |
|                               |                         |                    |                       | Tape Reel           | LY62L25716LL-45LLIT |
|                               | 55                      | Ultra<br>Low Power | 0°C~70°C              | Tray                | LY62L25716LL-55LL   |
|                               |                         |                    |                       | Tape Reel           | LY62L25716LL-55LLT  |
|                               |                         |                    | -20°C~80°C            | Tray                | LY62L25716LL-55LLE  |
|                               |                         |                    |                       | Tape Reel           | LY62L25716LL-55LLET |
|                               |                         |                    | -40°C~85°C            | Tray                | LY62L25716LL-55LLI  |
|                               |                         |                    |                       | Tape Reel           | LY62L25716LL-55LLIT |
| 70                            | Ultra<br>Low Power      | 0°C~70°C           | Tray                  | LY62L25716LL-70LL   |                     |
|                               |                         |                    | Tape Reel             | LY62L25716LL-70LLT  |                     |
|                               |                         | -20°C~80°C         | Tray                  | LY62L25716LL-70LLE  |                     |
|                               |                         |                    | Tape Reel             | LY62L25716LL-70LLET |                     |
|                               |                         | -40°C~85°C         | Tray                  | LY62L25716LL-70LLI  |                     |
|                               |                         |                    | Tape Reel             | LY62L25716LL-70LLIT |                     |



#### ORDERING INFORMATION

[Production Status: M/P]

| Package Type            | Access Time (Speed)(ns) | Power Type      | Temperature Range(°C) | Packing Type        | Lyontek Item No.    |
|-------------------------|-------------------------|-----------------|-----------------------|---------------------|---------------------|
| 48-ball (6mmx8mm) TFBGA | 45                      | Ultra Low Power | 0°C~70°C              | Tray                | LY62L25716GL-45LL   |
|                         |                         |                 |                       | Tape Reel           | LY62L25716GL-45LLT  |
|                         |                         |                 | -20°C~80°C            | Tray                | LY62L25716GL-45LLE  |
|                         |                         |                 |                       | Tape Reel           | LY62L25716GL-45LLET |
|                         |                         |                 | -40°C~85°C            | Tray                | LY62L25716GL-45LLI  |
|                         |                         |                 |                       | Tape Reel           | LY62L25716GL-45LLIT |
|                         | 55                      | Ultra Low Power | 0°C~70°C              | Tray                | LY62L25716GL-55LL   |
|                         |                         |                 |                       | Tape Reel           | LY62L25716GL-55LLT  |
|                         |                         |                 | -20°C~80°C            | Tray                | LY62L25716GL-55LLE  |
|                         |                         |                 |                       | Tape Reel           | LY62L25716GL-55LLET |
|                         |                         |                 | -40°C~85°C            | Tray                | LY62L25716GL-55LLI  |
|                         |                         |                 |                       | Tape Reel           | LY62L25716GL-55LLIT |
| 70                      | Ultra Low Power         | 0°C~70°C        | Tray                  | LY62L25716GL-70LL   |                     |
|                         |                         |                 | Tape Reel             | LY62L25716GL-70LLT  |                     |
|                         |                         | -20°C~80°C      | Tray                  | LY62L25716GL-70LLE  |                     |
|                         |                         |                 | Tape Reel             | LY62L25716GL-70LLET |                     |
|                         |                         | -40°C~85°C      | Tray                  | LY62L25716GL-70LLI  |                     |
|                         |                         |                 | Tape Reel             | LY62L25716GL-70LLIT |                     |





#### ORDERING INFORMATION

[Production Status: **EOL**]

Power Type : Special Ultra Low Power

| Package Type             | Access Time (Speed)(ns) | Temperature Range(°C) | Packing Type | EOL Item No.        | Substitute Product   |
|--------------------------|-------------------------|-----------------------|--------------|---------------------|----------------------|
| 44Pin(400mil)<br>TSOP II | 45                      | 0°C~70°C              | Tray         | LY62L25716ML-45SL   | LY62L25716BML-45SL   |
|                          |                         |                       | Tape Reel    | LY62L25716ML-45SLT  | LY62L25716BML-45SLT  |
|                          |                         | -20°C~80°C            | Tray         | LY62L25716ML-45SLE  | LY62L25716BML-45SLI  |
|                          |                         |                       | Tape Reel    | LY62L25716ML-45SLET | LY62L25716BML-45SLIT |
|                          |                         | -40°C~85°C            | Tray         | LY62L25716ML-45SLI  | LY62L25716BML-45SLI  |
|                          |                         |                       | Tape Reel    | LY62L25716ML-45SLIT | LY62L25716BML-45SLIT |
|                          | 55                      | 0°C~70°C              | Tray         | LY62L25716ML-55SL   | LY62L25716BML-45SL   |
|                          |                         |                       | Tape Reel    | LY62L25716ML-55SLT  | LY62L25716BML-45SLT  |
|                          |                         | -20°C~80°C            | Tray         | LY62L25716ML-55SLE  | LY62L25716BML-45SLE  |
|                          |                         |                       | Tape Reel    | LY62L25716ML-55SLET | LY62L25716BML-45SLET |
|                          |                         | -40°C~85°C            | Tray         | LY62L25716ML-55SLI  | LY62L25716BML-45SLI  |
|                          |                         |                       | Tape Reel    | LY62L25716ML-55SLIT | LY62L25716BML-45SLIT |
|                          | 70                      | 0°C~70°C              | Tray         | LY62L25716ML-70SL   | LY62L25716BML-45SL   |
|                          |                         |                       | Tape Reel    | LY62L25716ML-70SLT  | LY62L25716BML-45SLT  |
|                          |                         | -20°C~80°C            | Tray         | LY62L25716ML-70SLE  | LY62L25716BML-45SLE  |
|                          |                         |                       | Tape Reel    | LY62L25716ML-70SLET | LY62L25716BML-45SLET |
|                          |                         | -40°C~85°C            | Tray         | LY62L25716ML-70SLI  | LY62L25716BML-45SLI  |
|                          |                         |                       | Tape Reel    | LY62L25716ML-70SLIT | LY62L25716BML-45SLIT |



#### ORDERING INFORMATION

[Production Status: **EOL**]

Power Type : Special Ultra Low Power

| Package Type                  | Access Time (Speed)(ns) | Temperature Range(°C) | Packing Type | EOL Item No.        | Substitute Product  |
|-------------------------------|-------------------------|-----------------------|--------------|---------------------|---------------------|
| 48-Pin<br>12mmx20mm<br>TSOP I | 45                      | 0°C~70°C              | Tray         | LY62L25716LL-45SL   | LY62L25716LL-45LL   |
|                               |                         |                       | Tape Reel    | LY62L25716LL-45SLT  | LY62L25716LL-45LLT  |
|                               |                         | -20°C~80°C            | Tray         | LY62L25716LL-45SLE  | LY62L25716LL-45LLE  |
|                               |                         |                       | Tape Reel    | LY62L25716LL-45SLET | LY62L25716LL-45LLET |
|                               |                         | -40°C~85°C            | Tray         | LY62L25716LL-45SLI  | LY62L25716LL-45LLI  |
|                               |                         |                       | Tape Reel    | LY62L25716LL-45SLIT | LY62L25716LL-45LLIT |
|                               | 55                      | 0°C~70°C              | Tray         | LY62L25716LL-55SL   | LY62L25716LL-55LL   |
|                               |                         |                       | Tape Reel    | LY62L25716LL-55SLT  | LY62L25716LL-55LLT  |
|                               |                         | -20°C~80°C            | Tray         | LY62L25716LL-55SLE  | LY62L25716LL-55LLE  |
|                               |                         |                       | Tape Reel    | LY62L25716LL-55SLET | LY62L25716LL-55LLET |
|                               |                         | -40°C~85°C            | Tray         | LY62L25716LL-55SLI  | LY62L25716LL-55LLI  |
|                               |                         |                       | Tape Reel    | LY62L25716LL-55SLIT | LY62L25716LL-55LLIT |
|                               | 70                      | 0°C~70°C              | Tray         | LY62L25716LL-70SL   | LY62L25716LL-70LL   |
|                               |                         |                       | Tape Reel    | LY62L25716LL-70SLT  | LY62L25716LL-70LLT  |
|                               |                         | -20°C~80°C            | Tray         | LY62L25716LL-70SLE  | LY62L25716LL-70LLE  |
|                               |                         |                       | Tape Reel    | LY62L25716LL-70SLET | LY62L25716LL-70LLET |
|                               |                         | -40°C~85°C            | Tray         | LY62L25716LL-70SLI  | LY62L25716LL-70LLI  |
|                               |                         |                       | Tape Reel    | LY62L25716LL-70SLIT | LY62L25716LL-70LLIT |



#### ORDERING INFORMATION

[Production Status: **EOL**]

Power Type : Special Ultra Low Power

| Package Type                  | Access Time (Speed)(ns) | Temperature Range(°C) | Packing Type        | EOL Item No.         | Substitute Product   |
|-------------------------------|-------------------------|-----------------------|---------------------|----------------------|----------------------|
| 48-ball<br>(6mmx8mm)<br>TFBGA | 45                      | 0°C~70°C              | Tray                | LY62L25716GL-45SL    | LY62L25716BGL-45SL   |
|                               |                         |                       | Tape Reel           | LY62L25716GL-45SLT   | LY62L25716BGL-45SLT  |
|                               |                         | -20°C~80°C            | Tray                | LY62L25716GL-45SLE   | LY62L25716BGL-45SLI  |
|                               |                         |                       | Tape Reel           | LY62L25716GL-45SLET  | LY62L25716BGL-45SLIT |
|                               |                         | -40°C~85°C            | Tray                | LY62L25716GL-45SLI   | LY62L25716BGL-45SLI  |
|                               |                         |                       | Tape Reel           | LY62L25716GL-45SLIT  | LY62L25716BGL-45SLIT |
|                               | 55                      | 0°C~70°C              | Tray                | LY62L25716GL-55SL    | LY62L25716BGL-45SL   |
|                               |                         |                       | Tape Reel           | LY62L25716GL-55SLT   | LY62L25716BGL-45SLT  |
|                               |                         | -20°C~80°C            | Tray                | LY62L25716GL-55SLE   | LY62L25716BGL-45SLI  |
|                               |                         |                       | Tape Reel           | LY62L25716GL-55SLET  | LY62L25716BGL-45SLIT |
|                               |                         | -40°C~85°C            | Tray                | LY62L25716GL-55SLI   | LY62L25716BGL-45SLI  |
|                               |                         |                       | Tape Reel           | LY62L25716GL-55SLIT  | LY62L25716BGL-45SLIT |
| 70                            | 0°C~70°C                | Tray                  | LY62L25716GL-70SL   | LY62L25716BGL-45SL   |                      |
|                               |                         | Tape Reel             | LY62L25716GL-70SLT  | LY62L25716BGL-45SLT  |                      |
|                               | -20°C~80°C              | Tray                  | LY62L25716GL-70SLE  | LY62L25716BGL-45SLI  |                      |
|                               |                         | Tape Reel             | LY62L25716GL-70SLET | LY62L25716BGL-45SLIT |                      |
|                               | -40°C~85°C              | Tray                  | LY62L25716GL-70SLI  | LY62L25716BGL-45SLI  |                      |
|                               |                         | Tape Reel             | LY62L25716GL-70SLIT | LY62L25716BGL-45SLIT |                      |



**Lyontek Inc.**

**LY62L25716**

Rev. 3.0

**256K X 16 BIT LOW POWER CMOS SRAM**

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