

## 8M X 36 Bits DRAM SIMM with Extended Data Out (EDO)

### FEATURES

- Performance range:

| $t_{RAC}$ | $t_{CAC}$ | $t_{RC}$ | $t_{HPC}$ |
|-----------|-----------|----------|-----------|
| 60ns      | 15ns      | 104ns    | 25ns      |

- EDO Mode operation
- $\overline{CAS}$ -before- $\overline{RAS}$  refresh capability
- $\overline{RAS}$ -only and Hidden refresh capability
- TTL compatible inputs and outputs
- +5V  $\pm$  10% power supply
- 2048 cycles/32ms refresh
- Four  $\overline{CAS}$  ECC pinout
- Gold or Tin edge connections

### GENERAL DESCRIPTION

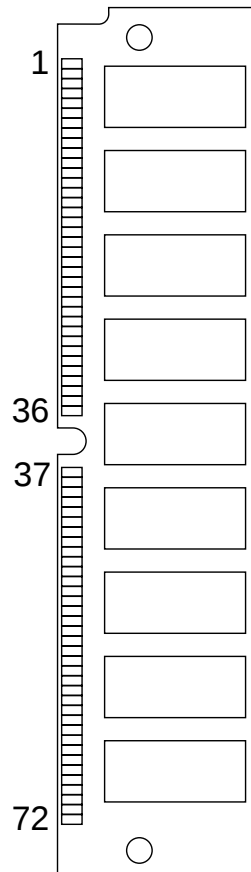
The SiliconTech SL36(T/S)4B8M2F-A60 is a 8M x 36 bits Dynamic RAM (DRAM) Single In-line Memory Module (SIMM). This module consists of eighteen CMOS 4M x 4 bits DRAMs in 24-pin 300-mil SOJ packages. Decoupling capacitors of 0.1 $\mu$ F are mounted for the DRAMs.

The module is for use in computers using ECC without single-byte accesses.

The SL36T4B8M2F-A60 has tin edge connectors and the SL36S4B8M2F-A60 has gold edge connectors and are intended for mounting into 72-pin SIMM edge connector sockets with like lead.

### PIN CONFIGURATION

| Pin | Symbol    | Pin | Symbol             | Pin | Symbol    |
|-----|-----------|-----|--------------------|-----|-----------|
| 1   | $V_{SS}$  | 25  | $DQ_{24}$          | 49  | $DQ_9$    |
| 2   | $DQ_0$    | 26  | $DQ_7$             | 50  | $DQ_{27}$ |
| 3   | $DQ_{18}$ | 27  | $DQ_{25}$          | 51  | $DQ_{10}$ |
| 4   | $DQ_1$    | 28  | $A_7$              | 52  | $DQ_{28}$ |
| 5   | $DQ_{19}$ | 29  | NC                 | 53  | $DQ_{11}$ |
| 6   | $DQ_2$    | 30  | $V_{CC}$           | 54  | $DQ_{29}$ |
| 7   | $DQ_{20}$ | 31  | $A_8$              | 55  | $DQ_{12}$ |
| 8   | $DQ_3$    | 32  | $A_9$              | 56  | $DQ_{30}$ |
| 9   | $DQ_{21}$ | 33  | NC                 | 57  | $DQ_{13}$ |
| 10  | $V_{CC}$  | 34  | $\overline{RAS}_2$ | 58  | $DQ_{31}$ |
| 11  | NC        | 35  | $PQ_{26}$          | 59  | $V_{CC}$  |
| 12  | $A_0$     | 36  | $PQ_8$             | 60  | $DQ_{32}$ |
| 13  | $A_1$     | 37  | $PQ_{17}$          | 61  | $DQ_{14}$ |
| 14  | $A_2$     | 38  | $PQ_{35}$          | 62  | $DQ_{33}$ |
| 15  | $A_3$     | 39  | $V_{SS}$           | 63  | $DQ_{15}$ |
| 16  | $A_4$     | 40  | $\overline{CAS}_0$ | 64  | $DQ_{34}$ |
| 17  | $A_5$     | 41  | $\overline{CAS}_2$ | 65  | $DQ_{16}$ |
| 18  | $A_6$     | 42  | $\overline{CAS}_3$ | 66  | NC        |
| 19  | $A_{10}$  | 43  | $\overline{CAS}_1$ | 67  | $PD_1$    |
| 20  | $DQ_4$    | 44  | $\overline{RAS}_0$ | 68  | $PD_2$    |
| 21  | $DQ_{22}$ | 45  | NC                 | 69  | $PD_3$    |
| 22  | $DQ_5$    | 46  | NC                 | 70  | $PD_4$    |
| 23  | $DQ_{23}$ | 47  | $\overline{W}$     | 71  | NC        |
| 24  | $DQ_6$    | 48  | NC                 | 72  | $V_{SS}$  |



### Pin Names

| Pin Name                                | Pin Function          |
|-----------------------------------------|-----------------------|
| $A_0$ - $A_{10}$                        | Address Inputs        |
| $DQ_x$                                  | Data In/Out           |
| $PQ_{8, 17, 26, 35}$                    | ECC In/Out            |
| $\overline{W}$                          | Read/Write Input      |
| $\overline{RAS}_0$ - $\overline{RAS}_3$ | Row Address Strobe    |
| $\overline{CAS}_0$ - $\overline{CAS}_3$ | Column Address Strobe |
| $PD_1$ - $PD_4$                         | Presence Detect       |
| $V_{CC}$                                | Power (+5V)           |
| $V_{SS}$                                | Ground                |
| NC                                      | No Connection         |

### Presence Detect Pins\*

| For 8Mx36 Parity: |
|-------------------|
| $PD_1$ =NC        |
| $PD_2$ = $V_{SS}$ |
| $PD_3$ =NC        |
| $PD_4$ =NC        |

\* Pin Connection Changing Available

## FUNCTIONAL BLOCK DIAGRAM

