

### AS4C256M8D2A-25BIN vs MT47H256M8EB-25E:IT Comparison

| Parameter                     | AS4C256M8D2A-25BIN                                     | MT47H256M8EB-25E:IT C                                  | Comparison Result |
|-------------------------------|--------------------------------------------------------|--------------------------------------------------------|-------------------|
| <b>Product Description</b>    | <b>DDR2 SDRAM</b>                                      | <b>DDR2 SDRAM</b>                                      | Same              |
| <b>Capacity</b>               | 2Gb (256M x 8)                                         | 2Gb (256M x 8)                                         | Same              |
| <b>Memory Organization</b>    | 32M, x8bits, x8 banks                                  | 32M, x8bits, x8 banks                                  | Same              |
| <b>Operating Power Supply</b> | V <sub>DD</sub> & V <sub>DDQ</sub> = 1.8V<br>(+/-0.1V) | V <sub>DD</sub> & V <sub>DDQ</sub> = 1.8V<br>(+/-0.1V) | Same              |
| <b>Operating Temperature</b>  | Industrial (-40°C to 95°C)                             | Industrial (-40°C to 95°C)                             | Same              |
| <b>Clock Frequency</b>        | 400MHz                                                 | 400MHz                                                 | Same              |
| <b>Data Rate (MT/s)</b>       | 800                                                    | 800                                                    | Same              |
| <b>CAS Latency</b>            | 5                                                      | 5                                                      | Same              |
| <b>tRCD &amp; tRP (ns)</b>    | 12.5                                                   | 12.5                                                   | Same              |
| <b>Row / Column Address</b>   | A[14:0] / A[9:0]                                       | A[14:0] / A[9:0]                                       | Same              |
| <b>Page Size</b>              | 1KB                                                    | 1KB                                                    | Same              |
| <b>Average Refresh Period</b> | 8192 cycles/64ms                                       | 8192 cycles/64ms                                       | Same              |
| <b>I/O Capacitance</b>        | CIO: 2.5pf to 3.5pf                                    | CIO: 2.5pf to 4pf                                      | Comparable        |
| <b>Pin to Pin Compatible</b>  | Pin to Pin Compatible                                  |                                                        | Same              |
| <b>AC/DC Characteristics</b>  | Same                                                   | Same                                                   | Meet JEDEC        |
| <b>IDD Specification</b>      |                                                        |                                                        |                   |
| <b>IDD Spec conditions</b>    | -40C ≤ Tc ≤ 95C                                        | -40C ≤ Tc ≤ 95C                                        | Same              |
| <b>I<sub>DD0</sub> (mA)</b>   | 62                                                     | 75                                                     | Comparable        |
| <b>I<sub>DD1</sub> (mA)</b>   | 59                                                     | 85                                                     | Comparable        |
| <b>I<sub>DD2P</sub> (mA)</b>  | 12                                                     | 12                                                     | Comparable        |
| <b>I<sub>DD2Q</sub> (mA)</b>  | 36                                                     | 30                                                     | Comparable        |
| <b>I<sub>DD2N</sub> (mA)</b>  | 37                                                     | 35                                                     | Comparable        |
| <b>I<sub>DD3Pf</sub> (mA)</b> | 15                                                     | 25                                                     | Comparable        |
| <b>I<sub>DD3Ps</sub> (mA)</b> | 15                                                     | 14                                                     | Comparable        |
| <b>I<sub>DD3N</sub> (mA)</b>  | 45                                                     | 50                                                     | Comparable        |
| <b>I<sub>DD4R</sub> (mA)</b>  | 92                                                     | 130                                                    | Comparable        |
| <b>I<sub>DD4W</sub> (mA)</b>  | 97                                                     | 130                                                    | Comparable        |
| <b>I<sub>DD5</sub> (mA)</b>   | 207                                                    | 170                                                    | Comparable        |
| <b>I<sub>DD6</sub> (mA)</b>   | 15                                                     | 12                                                     | Comparable        |
| <b>I<sub>DD7</sub> (mA)</b>   | 147                                                    | 220                                                    | Comparable        |
| <b>Package 60b FBGA</b>       | 8 x 10 x 1.2mm<br>Ball Array : 6.4 x 8.0 x 0.8mm       | 9 x 11.5 x 1.2mm<br>Ball Array : 6.4 x 8.0 x 0.8mm     | Comparable        |
| <b>Package Material</b>       | Pb and Halogen Free                                    | Pb and Halogen Free                                    | Same              |