



12815 NE 124<sup>th</sup> St STE#D, Kirkland, WA-98034

## AS4C64M16D1-6TCN/TIN vs AS4C64M16D1A-6TCN/TIN Comparison

| Part Number & result<br>Parameter | AS4C64M16D1-6TCN/TIN                   | AS4C64M16D1A-6TCN/TIN<br>(rev.A)       | Comparison Result   |
|-----------------------------------|----------------------------------------|----------------------------------------|---------------------|
| Product Description               | DDR1 SDRAM                             | DDR1 SDRAM                             | Same                |
| Fab Process Technology            | 63nm                                   | 45nm                                   | Different IPs       |
| Capacity                          | 1Gb (64M x 16)                         | 1Gb (64M x 16)                         | Same                |
| Memory Organization               | 16M, x16 bits, x4 banks                | 16M, x16 bits, x4 banks                | Same                |
| Operating Power Supply            | VDD/Q = 2.5V ± 0.2V                    | VDD/Q = 2.5V ± 0.2V                    | Same                |
| Operating Temperature             | Industrial (-40°C to 85°C)             | Industrial (-40°C to 85°C)             | Same                |
| Max. Clock Frequency              | 166MHz                                 | 166MHz                                 | Same                |
| Clock Cycle time "tCK" (ns)       | 6                                      | 6                                      | Same                |
| CAS Latency                       | 2,2.5 & 3                              | 2,2.5 & 3                              | Same                |
| Burst Length                      | 2,4,8                                  | 2,4,8                                  | Same                |
| tRCD & tRP (ns)                   | 15                                     | 15                                     | Same                |
| Row Address                       | A0-A13                                 | A0-A13                                 | Same                |
| Column Address                    | A0-A9                                  | A0-A9                                  | Same                |
| Average Refresh Period            | 8192cycles/64ms                        | 8192cycles/64ms                        | Same                |
| I/O Capacitance                   | CIO:                                   | CIO: 4pf to 5pf                        | Comparable          |
| Pin to Pin Compatible             | Pin to Pin Compatible                  |                                        | Same                |
| AC/DC Characteristics             | Same                                   | Same                                   | Meet JEDEC          |
| IDD Specification                 |                                        |                                        |                     |
| IDD Spec conditions               | -40C ≤ Ta ≤ 85C<br>VDD/Q = 2.5V ± 0.2V | -40C ≤ Ta ≤ 85C<br>VDD/Q = 2.5V ± 0.2V |                     |
| IDD0 (mA)                         | 85                                     | 160                                    | No A version better |
| IDD1 (mA)                         | 105                                    | 180                                    | No A version better |
| IDD2P (mA)                        | 6                                      | 10                                     | No A version better |
| IDD2F (mA)                        | 30                                     | 70                                     | No A version better |
| IDD2Q (mA)                        | 25                                     | 70                                     | No A version better |
| IDD3P (mA)                        | 15                                     | 40                                     | No A version better |
| IDD3N (mA)                        | 35                                     | 130                                    | No A version better |
| IDD4R (mA)                        | 115                                    | 260                                    | No A version better |
| IDD4W (mA)                        | 145                                    | 260                                    | No A version better |
| IDD5 (mA)                         | 185                                    | 280                                    | No A version better |
| IDD6 (mA)                         | 3                                      | 12                                     | No A version better |
| IDD7 (mA)                         | 230                                    | 420                                    | No A version better |
| Package                           | 66 Pin TSOP II,<br>0.65mm pin pitch    | 66 Pin TSOP II,<br>0.65mm pin pitch    | Same                |
| Package Material                  | Pb & Halogen Free                      | Pb & Halogen Free                      | Same                |