



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

### AS4C1G8MD3L-12BCN vs AS4C1G8MD3LA-10BCN Comparison

| Part Number & result<br>Parameter       | AS4C1G8MD3L-12BCN                               | AS4C1G8D3LA-10BCN                                      | Comparison Result                   |
|-----------------------------------------|-------------------------------------------------|--------------------------------------------------------|-------------------------------------|
| Product Description                     | DDR3L SDRAM                                     | DDR3L SDRAM                                            | Same                                |
| Density/Memory Size                     | 8Gb                                             | 8Gb                                                    | Same                                |
| Memory Organization                     | 128Meg x 8 x 8 banks                            | 128Meg x 8 x 8 banks                                   | Same                                |
| Data Bus Width                          | 8 bits                                          | 8 bits                                                 | Same                                |
| Row Address                             | 64K (A[15:0])                                   | 64K (A[15:0])                                          | Same                                |
| Column Address                          | 2K (A[11,9:0])                                  | 2K (A[11,9:0])                                         | Same                                |
| Page Size                               | 2KB                                             | 2KB                                                    | Same                                |
| Operating Power Supply                  | VDD/Q=1.35V (1.283~1.45V)                       | VDD/Q=1.35V (1.283~1.45V)                              | Same                                |
| DDR3 Compatibility                      | Yes (VDD/Q= 1.425V ~1.575V)                     | Yes (VDD/Q= 1.425V ~1.575V)                            | Same                                |
| Operating Temperature                   | Commercial (0°C ≤ TC ≤ +95°C)                   | Commercial (0°C ≤ TC ≤ +95°C)                          | Same                                |
| Max. Clock Frequency                    | 800 MHz                                         | 933 MHz                                                | Rev A better                        |
| Max Data Rate (MT/s)                    | 1600 Mbps                                       | 1866 Mbps                                              | Same                                |
| tRCD/tRP/CL                             | 13.75/13.75/11                                  | 13.91/13.91/13 for 933Mhz<br>13.75/13.75/11 for 800Mhz | Rev A better                        |
| I/O Capacitance                         | CIO :2.2pF Max                                  | CIO : 2.2pF Max                                        | Same                                |
| Pin to Pin Compatible Register settings | Optional TDQS/TDQS# pin, controlled by MR1, A11 | MR2 : A0:A2 additional                                 | Comparable. Customer to check       |
| Die per Package                         | Single Die Part                                 | Dual Die Part                                          | Comparable                          |
| IDD0 (mA)                               | 67                                              | 96                                                     | Non-A Better                        |
| IDD1 (mA)                               | 78                                              | 125                                                    | Non-A Better                        |
| IDD2P0 / 2P1 (mA)                       | 11 / 14                                         | 16 / 30                                                | Non-A Better                        |
| IDD2N / 2NT (mA)                        | 36 / 40                                         | 50 / 58                                                | Non-A Better                        |
| IDD3P / 3N (mA)                         | 36 / 51                                         | 54 / 62                                                | Non-A Better                        |
| IDD4R / 4W (mA)                         | 125                                             | 200 / 360                                              | Non-A Better                        |
| IDD5B (mA)                              | 245                                             | 477                                                    | Non-A Better                        |
| IDD6 / 6ET (mA)                         | 24 / 34                                         | 24 / 32                                                | same                                |
| IDD7 (mA)                               | 190                                             | 270                                                    | Non-A Better                        |
| IDD8 (mA)                               | 16                                              | 20                                                     | comparable                          |
| Package                                 | 78b FBGA<br>(9mm x 13.2mm)                      | 78b FBGA<br>(9mm x 10.6mm)                             | Rev A - Smaller<br>Ball Matrix Same |
| Package Material                        | Pb and Halogen Free                             | Pb and Halogen Free                                    | Same                                |