

# Intel Platform Memory Operations

## Disclaimer

INTEL DISCLAIMS ALL LIABILITY FOR THESE DEVICES, INCLUDING LIABILITY FOR INFRINGEMENT OF ANY PROPRIETARY RIGHTS RELATING TO THESE DEVICES OR THE IMPLEMENTATION OF INFORMATION IN THIS DOCUMENT. INTEL DOES NOT WARRANT OR REPRESENT THAT SUCH DEVICES OR IMPLEMENTATION WILL NOT INFRINGE SUCH RIGHTS. INTEL IS NOT OBLIGATED TO PROVIDE ANY SUPPORT, INSTALLATION, OR OTHER ASSISTANCE WITH REGARD TO THESE DEVICES.

THE INTEL PRODUCT REFERRED TO IN THIS DOCUMENT IS INTENDED FOR STANDARD COMMERCIAL USE ONLY. CUSTOMERS ARE SOLELY RESPONSIBLE FOR ASSESSING THE SUITABILITY OF THE PRODUCT AND/OR DEVICES FOR USE IN PARTICULAR APPLICATIONS. THE REFERENCED INTEL PRODUCT IS NOT INTENDED FOR USE IN CRITICAL CONTROL OR SAFETY SYSTEMS OR IN NUCLEAR FACILITY APPLICATIONS.

Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by the sale of Intel products. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications. Intel retains the right to make changes to its test specifications and memory list at any time, without notice.

The hardware vendor remains solely responsible for the design, sale and functionality of its product, including any liability arising from product infringement or product warranty. Only approved software drivers and accessories that are recommended for the revision number of the boards and system being operated should be used with Intel products. Please note that, as a result of warranty repairs or replacements, alternate software and firmware versions may be required for proper operation of the equipment.

Copyright © Intel Corporation 2010.

\* Other brands and names are the property of their respective owners.

## Intel Platform Memory Operations

### DDR3L 1333/1066/800MHz DRAM Component Validation Results

This information is provided as a guide to component compliance. This testing is not intended to replace the normal OEM component qualification process. Intel encourages memory suppliers to validate their fastest speed/latency component. The slower speed/latency components using the same die revision as the listed fast component may not be explicitly listed in this table. This does not preclude the slower components from being submitted in memory modules for testing if the component has passed testing and has been listed in this table at the fastest speed/latency. Please contact the supplier directly to obtain information regarding the corresponding slower speed/latency parts.

Supplier	Part Number	Density	Width	Freq	Latency CL-tRCD-tRP	Notes	Component Date Code
Elpida	EDJ1104EDSE-DJ-F	1Gb	4	1333	9-9-9	-	936
Elpida	EDJ1108EDSE-DJ-F	1Gb	8	1333	9-9-9	-	927
Hynix	H5TC1G43TFR-G7A, ◇	1Gb	4	1066	7-7-7	-	933
Hynix	H5TC1G83TFR-G7A, ◇	1Gb	8	1066	7-7-7	-	933
Hynix	H5TC2G43BFR-G7A	2Gb	8	1066	7-7-7	-	948
Hynix	H5TC2G43BFR-H9A	2Gb	8	1333	9-9-9	-	942
Hynix	H5TC2G83BFR-G7A	2Gb	8	1066	7-7-7	-	945
Hynix	H5TC1G43BFR-G7A, ◇	1Gb	4	1066	7-7-7	-	918
Hynix	H5TC1G43BFR-H9A, ◇	1Gb	4	1333	9-9-9	-	933
Hynix	H5TC1G43TFR-H9A, ◇	1Gb	4	1333	9-9-9	-	946
Hynix	H5TC1G83BFR-G7A, ∇◇	1Gb	8	1066	7-7-7	-	911
Hynix	H5TC1G83BFR-H9A, ◇	1Gb	8	1333	9-9-9	-	933
Hynix	H5TC1G83TFR-H9A, ◇	1Gb	8	1333	9-9-9	-	946
Hynix	H5TC2G43AFR-G7A, ◇	2Gb	4	1066	7-7-7	-	917
Hynix	H5TC2G43AFR-H9A, ◇	2Gb	4	1333	9-9-9	-	930
Hynix	H5TC2G83AFR-G7A, ◇	2Gb	8	1066	7-7-7	-	910
Hynix	H5TC2G83AFR-H9A, ◇	2Gb	8	1333	9-9-9	-	930
Hynix	H5TC2G83BFR-H9A	2Gb	8	1333	9-9-9	-	942
Hynix	H5TC4G43AMR-G7A, ◇	2Gb (DDP)	4	1066	7-7-7	-	930

## Intel Platform Memory Operations

Supplier	Part Number	Density	Width	Freq	Latency CL-tRCD-tRP	Notes	Component Date Code
Micron	MT41K128M8JP-15E:F	1Gb	8	1333	9-9-9	-	926
Micron	MT41K256M8HX-15E	2Gb	8	1333	9-9-9	-	1023
Micron	MT41K512M4HX-15E	2Gb	4	1333	9-9-9	-	1023
Micron	MT41K128M8JP-15E	1Gb	8	1333	9-9-9	-	926
Micron	MT41K128M8JP-15F	1Gb	8	1333	9-9-9	-	926
Micron	MT41K128M8JP-187E	1Gb	8	1066	7-7-7	-	906
Micron	MT41K256M4JP-15E	1Gb	4	1333	9-9-9	-	926
Samsung	K4B1G0446F-HYF8	1Gb	4	1066	7-7-7	-	1001
Samsung	K4B1G0446F-HYH9, ◇	1Gb	4	1333	9-9-9	-	1001
Samsung	K4B1G0846F-HYF8, ◇	1Gb	8	1066	7-7-7	-	1004
Samsung	K4B1G0846F-HYH9, ◇	1Gb	8	1333	9-9-9	-	1004
Samsung	K4B2G0846C-HYH9, ◇	2Gb	8	1333	9-9-9	-	940
Samsung	K4B4G0446B-MYF8, ◇	2Gb (DDP)	4	1066	7-7-7	-	1004
Samsung	K4B4G0446C-MYF8, ◇	2Gb (DDP)	4	1066	7-7-7	-	1019
Samsung	K4B1G0446E-HYF8, ◇	1Gb	4	1066	7-7-7	-	913
Samsung	K4B1G0446E-HYH9, ◇	1Gb	4	1333	9-9-9	-	913
Samsung	K4B2G0446E-MYF8, ◇	1Gb (DDP)	4	1066	7-7-7	-	937
Samsung	K4B1G0846E-HYF8, ◇	1Gb	8	1066	7-7-7	-	913
Samsung	K4B1G0846E-HYH9, ◇	1Gb	8	1333	9-9-9	-	913
Samsung	K4B2G0446B-HYF8, ◇	2Gb	4	1066	7-7-7	-	910
Samsung	K4B2G0446B-HYH9, ◇	2Gb	4	1333	9-9-9	-	913
Samsung	K4B2G0446C-HYF8, ◇	2Gb	4	1066	7-7-7	-	940
Samsung	K4B2G0446C-HYH9, ◇	2Gb	4	1333	9-9-9	-	940
Samsung	K4B2G0846B-HYF8, ◇	2Gb	8	1066	7-7-7	-	910
Samsung	K4B2G0846B-HYH9, ◇	2Gb	8	1333	9-9-9	-	913
Samsung	K4B2G0846C-HYF8, ◇	2Gb	8	1066	7-7-7	-	940

## Intel Platform Memory Operations

Supplier	Part Number	Density	Width	Freq	Latency CL-tRCD-tRP	Notes	Component Date Code

▽ Exceeds maximum VOX specification.

◇ Write margin testing was performed at component level by Shmoo testing for voltage and timing, based on limited sampling.

