

AS4C512M16D3L-12BCN vs MT41K512M16HA-125:A Comparison

Part Number & result Parameter	AS4C512M16D3L-12BCN (Micro Die, Alliance Top Mark)	MT41K512M16HA-125:A (Micro Die, Micron TopMark)	Comparison Result
Product Description	DDR3L SDRAM	DDR3L SDRAM	Same
Die per Package	Single Die Package	Single Die Package	Same
Density/Memory Size	8Gb	8Gb	Same
Memory Organization	64Meg x 16 x 8 banks	64Meg x 16 x 8 banks	Same
Data Bus Width	16 bits	16 bits	Same
Row / Column Address	A[15:0] / A[9:0]	A[15:0] / A[9:0]	Same
Page Size	2KB	2KB	Same
Operating PowerSupply	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	800 MHz	Same
Max Data Rate (MT/s)	1600 Mbps	1600 Mbps	Same
tRCD/tRP/CL (ns)	13.75/13.75/11	13.75/13.75/11	Same
I/O Capacitance	CIO :2.2pF Max	CIO :2.2pF Max	Same
Pin to Pin Compatible	Yes	Yes	Same
AC/DC Characteristics	Same	Same	Same
IDD Specification			
IDD Spec conditions	-40C to 95C	-40C to 95C	same
I _{DD0} (mA)	67	67	Same
I _{DD1} (mA)	88	88	Same
I _{DD2P0} (mA)	11	11	Same
I _{DD2P1} (mA)	14	14	Same
I _{DD2N} (mA)	36	36	Same
I _{DD2Q} (mA)	34	34	Same
I _{DD3P} (mA)	36	36	Same
I _{DD3N} (mA)	51	51	Same
I _{DD4R} (mA)	185	185	Same
I _{DD4W} (mA)	185	185	Same
I _{DD5B} (mA)	245	245	Same
I _{DD6} (mA)	24	24	Same
I _{DD6ET} (mA)	34	34	Same
I _{DD7} (mA)	220	220	Same
I _{DD8} (mA)	16	16	Same
Package Dimension	96b FBGA (9 x 14 x 1.2mm)	96b FBGA (9 x 14 x 1.2mm)	Same
Package Ball Matrix	12 x 6.4 x 0.8mm	12 x 6.4 x 0.8mm	Same
Pb & Halogen Free	Yes	Yes	Same