

AS4C512M16D3LC-xxBxN vs AS4C512M16D3LB-xxBxN Comparison

Part Number & result Parameter	AS4C512M16D3LC-xxBxN (Rev.C)		AS4C512M16D3LB-xxBxN (Rev.B)	Comparison Result
Product Description	DDR3L SDRAM		DDR3L SDRAM	Same
Process Technology	25nm		25nm	Same
Density/Memory Size	8Gb		8Gb	Same
Memory Organization	64Mb x 16 IOs x 8 banks		64Mb x 16 IOs 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 Power Supply	VDD/Q=1.35V (1.283~1.45V)			Same
DDR3 Compatibility	Yes backward compatible to DDR3 (VDD/Q= 1.425V ~1.575V)			Same
Operating Temperatures	Commercial & Industrial Grades offered for both rev. B & C			Same
Clock Frequencies offered	933MHz & 800 MHz		800 MHz	Rev.C can achieve Max of 933MHz
Data Rates (MT/s)	1866 & 1600 Mbps		1600 Mbps	
tRCD / tRP (ns)	13.91 (933MHz) & 13.75 (800MHz)		13.75	
CL	13 (933MHz) & 11 (800MHz)		11	
I/O Capacitance	CIO :2.2pF Max		CIO : 2.2pF Max	Same
Pin to Pin Compatible	Yes			Same
IDD Specifications	933MHz	800MHz	800MHz	
IDD0(mA)	96	94	94	Same for 800MHz
IDD1(mA)	125	122	122	
IDD2P0 (mA)	16	16	16	
IDD2P1 (mA)	30	28	28	
IDD2N (mA)	50	48	48	
IDD2Q (mA)	50	48	48	
IDD3P (mA)	54	52	52	
IDD3N (mA)	62	60	60	
IDD4R (mA)	200	190	190	
IDD4W (mA)	360	350	350	
IDD5B (mA)	477	470	470	
IDD6 (mA)	24	24	24	
IDD6ET (mA)	32	32	32	
IDD7 (mA)	270	260	260	
IDD8 (mA)	20	20	20	
Package Dimension	96b FBGA (9 x 13 x 1.2mm)		96b FBGA (9 x 13.5 x 1.2mm)	comparable
Package Ball Matrix	12 x 6.4 x 0.8mm		12 x 6.4 x 0.8mm	Same
Pb & Halogen Free	Yes			

PART NUMBERING SYSTEM

AS4C	512M16	D3L	C	-	10/12	B	C/I/A	N	XX
AS : Alliance Memory 4C : DRAM Product Line	Memory Organization 512M16: 8Gb (512Mx16)	Product D3L : DDR3L	B : Die Rev.B C : Die Rev.C	-	Max Clock 10: 933MHz 12: 800MHz	Package B: FBGA	Temperature C : Commercial I : Industrial	N: Lead Free & Halogen Free	Packing Media None: Tray TR : Reel