

AS4C512M16D4-75BCN vs AS4C512M16D4B-62BCN Comparison

Part Number & result Parameter	AS4C512M16D4-75BCN	AS4C512M16D4B-62BCN	Comparison Result
Product Description	DDR4 SDRAM	DDR4 SDRAM	Same
Die	Rev.0, 20nm	Rev.B, 1-alpha	Different
Capacity	8Gb (512M x 16)	8Gb (512M x 16)	Same
Memory Organization	64Meg, x16bits, x8 banks	64Meg, x16bits, x8 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 1.2V (+/- 60mV)	V _{DD} & V _{DDQ} = 1.2V (+/- 60mV)	Same
	V _{pp} = 2.5V (-125mV,+250mV)	V _{pp} = 2.5V (-125mV,+250mV)	Same
Operating Temperature	Commercial (0°C ≤ T _c ≤ +95°C)	Commercial (0°C ≤ T _c ≤ +95°C)	Same
Max.Clock Frequencies	≤ 1333 MHz	≤ 1600 MHz	Rev.B better
Min. Cycle Time	0.75ns	0.625ns	Rev.B better
Max. Data Rate	≤ 2666 Mbps	≤ 3200 Mbps	Rev.B better
CAS Latency	19 (@ 1333MHz)	22 (@ 1600Mhz) 19 (@ 1333MHz)	Rev.B better
tAA(ns)	14.25 (@ 1333MHz)	13.75 (@ 1600Mhz) 14.25 (@ 1333MHz)	Rev.B better
tRCD (ns)	14.25 (@ 1333MHz)	13.75 (@ 1600Mhz) 14.25 (@ 1333MHz)	Rev.B better
tRP (ns)	14.25 (@ 1333MHz)	13.75 (@ 1600Mhz) 14.25 (@ 1333MHz)	Rev.B better
Number of Bank groups	2	2	Same
Bank Count per Group	4	4	Same
Row Addressing	64K (A0..A15)	64K (A0..A15)	Same
Column Addressing	1K (A0..9)	1K (A0..9)	Same
Page Size per bank	1KB	1KB	Same
Temperature controlled Refresh time	8192 Cycles at T _c range 64ms at 0C ~ 85C 32ms at 85C ~ 95C	8192 Cycles at T _c range 64ms at 0C ~ 85C 32ms at 85C ~ 95C	Same
AutoSelfRefreshsupport	Yes	Yes	Same
I/O Capacitance	CIO = 1.4pF Max	CIO = 1pF Max	Different
Pin to Pin Compatible	Pin to Pin Compatible		
AC/DC Characteristics	Same		Meet JEDEC



12815 NE 124th St STE#D, Kirkland, WA-98034

IDD Specification			
Parameter	AS4C512M16D4-75BCN	AS4C512M16D4B-62BCN	Comparison Result
IDD Spec conditions	0C to 95C	0C to 95C	
I _{DD0} (mA) , I _{pp0} (mA)	110 , 8	59, 5	Rev.B better
I _{DD1} (mA)	135	69	Rev.B better
I _{DD2N} (mA)	70	38	Rev.B better
I _{DD2NT} (mA)	135	46	Rev.B better
I _{DD2P} (mA)	40	30	Rev.B better
I _{DD2Q} (mA)	50	34	Rev.B better
I _{DD3N} (mA)	104	44	Rev.B better
I _{DD3P} (mA)	70	34	Rev.B better
I _{DD4R} (mA)	340	176	Rev.B better
I _{DD4W/A/B} (mA)	420	138	Rev.B better
I _{DD6N} (mA)	32	32	Rev.B better
I _{DD6R} (mA)	28	19	Rev.B better
I _{DD6E} (mA)	42	52	Rev.A better
I _{DD7} (mA)	320	225	Rev.B better
Package	96b FBGA 7.5x13x1.2mm	96b FBGA 7.5x13x1.2mm	Same
Solder Ball material Composition	SAC305 (96.5% Sn, 3% Ag, 0.5% Cu).	SACQ (92.45% Sn, 4% Ag, 0.5% Cu, 3% Bi, 0.05% Ni).	Different
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same