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

AS4C1G16D4-62BIN vs AS4C1G16D4A-62BCN Comparison

Part Number & result Parameter	AS4C1G16D4-62BIN	AS4C1G16D4A-62BCN	Comparison Result
Product Description	**DDR4 SDRAM**	**DDR4 SDRAM**	Same
Capacity	16Gb (1G x 16)	16Gb (1G x 16)	Same
Memory Organization	128Meg, x16bits, x8 banks	128Meg, x16bits, x8 banks	Same
Operating Power Supply	V_{DD} & V_{DDQ} = 1.2V (+/- 60mV)	V_{DD} & V_{DDQ} = 1.2V (+/- 60mV)	Same
	Vpp = 2.5V (-125mV,+250mV)	Vpp = 2.5V (-125mV,+250mV)	Same
Operating Temperature	Industrial (-40°C≤Tc≤ +95°C)	Commercial (0°C ≤ Tc ≤ +95°C)	Different
Max Clock Frequency	1600 MHz	1600 MHz	Same
Min. Cycle Time	0.625ns	0.625ns	Same
Max Data Rate	3200 Mbps	3200 Mbps	Same
CAS Latency	22	22	Same
tAA(ns)	13.75	13.75	Same
tRCD (ns)	13.75	13.75	Same
tRP (ns)	13.75	13.75	Same
Number of Bank groups	2	2	Same
Bank Count per Group	4	4	Same
Row Addressing	128K (A0..A16)	128K (A0..A16)	Same
Column Addressing	1K (A0..9)	1K (A0..9)	Same
Page Size per bank	2KB	2KB	Same
Temperature controlled Refresh time	64ms at 0C ~ 85C 32ms at 85C ~ 95C	64ms at 0C ~ 85C 32ms at 85C ~ 95C	Same
Low Power Auto Self Refresh support	Yes	Yes	Same
I/O Capacitance	CIO = 0.82pF Max	CIO = 0.82pF Max	Same
Pin to Pin Compatible	Pin to Pin Compatible		
AC/DC Characteristics	Same		Meet JEDEC

AS4C1G16D4-62BIN vs AS4C1G16D4A-62BCN Comparison

	AS4C1G16D4-62BIN	**AS4C1G16D4A-62BCN**	**Comparison Result**
IDD Spec conditions	-40C ≤ Tc ≤ 95C	0C ≤ Tc ≤ 95C	
I_{DD0} (mA) , Ipp0 (mA)	70, 4	70, 4	Same
I_{DD1} (mA)	90	84	Rev.A better
I_{DD2N} (mA)	50	45	Comparable
I_{DD2NT} (mA)	58	58	Same
I_{DD2P} (mA)	43	38	Comparable
I_{DD2Q} (mA)	47	42	Comparable
I_{DD3N} (mA)	62	62	Same
I_{DD3P} (mA)	51	51	Same
I_{DD4R} (mA)	299	193	Rev.A better
$I_{DD4W/A/B}$ (mA)	236	141	Rev.A better
I_{DD6N} (mA)	57	53	Comparable
I_{DD6R} (mA)	24	20	Comparable
I_{DD6E} (mA)	113	90	Rev.A better
I_{DD7} (mA)	251	200	Rev.A better
Package	**96b FBGA** 9x13x1.2mm	**96b FBGA** 7.5x13x1.2mm	Rev.A smaller, comparable
Solder Ball material Composition	**SACQ** (92.45% Sn, 4% Ag, 0.5% Cu, 3% Bi, 0.05% Ni)	**SACQ** (92.45% Sn, 4% Ag, 0.5% Cu, 3% Bi, 0.05% Ni).	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same