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

AS4C8M32MSA-6BIN vs AS4C8M32MSB-6BIN Comparison

Part Number & result / Parameter	AS4C8M32MSA-6BIN (rev.A)	AS4C8M32MSB-6BIN (rev.B)	Comparison Result
Product Description	Low Power SDRAM	Low Power SDRAM	Same
Process Technology	**63nm**	**65nm**	Different IPs
Capacity	256Mb (8M x 32)	256Mb (8M x 32)	Same
Memory Organization	2M, x32 bits, x4 banks	2M, x32 bits, x4 banks	Same
Operating Power Supply	VDD/Q = 1.7V ~1.95V	VDD/Q = 1.7V ~1.95V	Same
Operating Temperature	Industrial (-40°C to 85°C)	Industrial (-40°C to 85°C)	Same
Max. Clock Frequency	166MHz	166MHz	Comparable
Clock Cycle time "tCK" (ns)	6	6	Same
CAS Latency	1, 2 & 3	2 & 3	Different
Burst Length	1,2,4,8 & full page	1,2,4,8 & full page	Same
tRCD & tRP (ns)	18	18	Same
Row Address	A0-A11	A0-A11	Same
Column Address	A0-A8	A0-A8	Same
Average Refresh Period	4096 cycles/64ms	8192 cycles/64ms	Different
I/O Capacitance	CIO: 4pf to 6pf	CIO: 4pf to 6pf	Same
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
IDD Spec conditions	-40C ≤ Ta ≤ 85C VDD/Q = 1.7V~1.95V	-40C ≤ Ta ≤ 85C VDD/Q = 1.7V~1.95V	
I_{DD1} (mA)	80	38	Rev.B better
I_{DD2P} (mA)	0.25	0.4	Comparable
I_{DD2N} (mA)	15	10	Comparable
I_{DD3P} (mA)	5	3	Comparable
I_{DD3N} (mA)	20	20	Comparable
I_{DD4} (mA)	80	75	Comparable
I_{DD5} (mA)	115	50	Rev.B better
I_{DD6} (uA)	450	400	Comparable
I_{DD7} (uA)	10	10	Comparable
Package	90b FBGA (8x13mm)	90b FBGA (8x13mm)	Same
Package Material	Pb & Halogen Free	Pb & Halogen Free	Same