

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
Fab/Process Technology	PSMC/63nm	WEC/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	
IDD1 (mA)	80	38	Rev.B better
IDD2P (mA)	0.25	0.4	Comparable
IDD2N (mA)	15	10	Comparable
IDD3P (mA)	5	3	Comparable
IDD3N (mA)	20	20	Comparable
IDD4 (mA)	80	75	Comparable
IDD5 (mA)	115	50	Rev.B better
IDD6 (uA)	450	400	Comparable
IDD7 (uA)	10	10	Comparable
Package	90b FBGA (8x13mm)	90b FBGA (8x13mm)	Same
Package Material	Pb & Halogen Free	Pb & Halogen Free	Same