

AS4C8M16SA-6TIN vs AS4C8M16SB-6TIN Comparison

Part Number & result Parameter	AS4C8M16SA-6TIN	AS4C8M16SB-6TIN	Comparison Result
Product Description	SDRAM	SDRAM	Same
Process Technology	63nm	38nm	
Capacity	128Mb (8M x 16)	128Mb (8M x 16)	Same
Memory Organization	2M, x16 bits, x4 banks	2M, x16 bits, x4 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 3.3V (+/-0.3V)	V _{DD} & V _{DDQ} = 3.3V (+/-0.3V)	Same
Operating Temperature	Industrial (-40°C to 85°C)	Industrial (-40°C to 85°C)	Same
Clock Frequency	166.66MHz	166.66MHz	Comparable
Clock Cycle time (ns)	6	6	Same
CAS Latency	3	3	Same
tRCD & tRP (ns)	18	18	Same
Average Refresh Period	4096 cycles/64ms	4096 cycles/64ms	Same
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 = 3.3V ±0.3V	-40C ≤ Ta ≤ 85C VDD/Q = 3.3V ±0.3V	
I _{DD1} (mA)	50	60	Comparable
I _{DD2N} (mA)	20	30	Comparable
I _{DD2NS} (mA)	18	18	Comparable
I _{DD2P} (mA)	2	10	Comparable
I _{DD2PS} (mA)	2	10	Comparable
I _{DD3N} (mA)	35	40	Comparable
I _{DD3NS} (mA)	35	40	Comparable
I _{DD4} (mA)	62	62	Comparable
I _{DD5} (mA)	70	80	Comparable
I _{DD6} (mA)	2	10	Comparable
Package	54p TSOP II (400mils)	54p TSOP II (400mils)	Same
Package Material	Pb & Halogen Free	Pb & Halogen Free	Same