

AS4C16M16SA-6BIN vs MT48LC16M16A2B4-7E:ITG Comparison

Part Number & result Parameter	AS4C16M16SA-6BIN	MT48LC16M16A2B4-7E : ITG	Comparison Result
Product Description	SDRAM	SDRAM	Same
Capacity	256Mb (16M x 16)	256Mb (16M x 16)	Same
Memory Organization	4M, x16 bits, x4 banks	4M, 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
Max. Clock Frequency	166.66MHz	133MHz	Alliance better
Min Clock Cycle time (ns)	6	7.5	Alliance better
CAS Latency	3	2	Alliance better
tRCD & tRP (ns)	18	15	Alliance better
Average Refresh Period	8192 cycles/64ms	8192 cycles/64ms	Same
I/O Capacitance	CIO: 4pf to 6pf	CIO: 3pf to 6pf	Comparable
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)	60	100	Alliance better
I_{DD2N} (mA)	25	NA	NA
I_{DD2NS} (mA)	18	NA	NA
I_{DD2P} (mA)	2	2.5	Comparable
I_{DD2PS} (mA)	2	2.5	Comparable
I_{DD3N} (mA)	35	35	Comparable
I_{DD3NS} (mA)	35	35	Comparable
I_{DD4} (mA)	62	100	Alliance better
I_{DD5} (mA)	75	150	Alliance better
I_{DD6} (mA)	2	3	Comparable
Package 84b FBGA	8 x 8 x 1.2mm	8 x 12.5 x 1mm	Comparable
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same