

AS4C4M16SA-6TIN vs AS4C4M16SB-6TIN Comparison

Part Number & result Parameter	AS4C4M16SA-6TIN (rev.A)	AS4C4M16SB-6TIN (rev.B)	Comparison Result
Product Description	SDRAM	SDRAM	same
Process Technology	63nm	38nm	
Capacity	64Mb (4M x 16)	64Mb (4M x 16)	same
Memory Organization	1M, x16 bits, x4 banks	1M, 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	same
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: 2pf to 5pf	CIO: 2pf to 5pf	same
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
IDD Spec conditions	$-40C \leq Ta \leq 85C$ $VDD/Q = 3.3V \pm 0.3V$	$-40C \leq Ta \leq 85C$ $VDD/Q = 3.3V \pm 0.3V$	
IDD1 (mA)	50	50	same
IDD2N (mA)	20	25	comparable
IDD2NS (mA)	12	12	same
IDD2P (mA)	2	2	same
IDD2PS (mA)	2	2	same
IDD3N (mA)	30	30	same
IDD3NS (mA)	25	25	same
IDD4 (mA)	75	75	same
IDD5 (mA)	60	60	same
IDD6 (mA)	2	2	same
Package	54p TSOP II (400mils)	54p TSOP II (400mils)	same
Package Material	Pb & Halogen Free	Pb & Halogen Free	same