

AS4C32M16D2A-25BCN vs AS4C32M16D2C-25BCN Comparison

Part Number & result Parameter	AS4C32M16D2A-25BCN	AS4C32M16D2C-25BCN	Comparison Result
Product Description	DDR2 SDRAM	DDR2 SDRAM	Same
Process Technology	45nm	25nm	Different
Capacity	512Mb (32M x 16)	512Mb (32M x 16)	Same
Memory Organization	8M, x16bits, x4 banks	8Meg, x16bits, x4 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 1.8V (+/- 0.1V)	V _{DD} & V _{DDQ} = 1.8V (+/- 0.1V)	Same
Operating Temperature	Commercial (0°C to 85°C)	Commercial (0°C to 85°C)	Same
Clock Frequency	400MHz	400MHz	Same
Data Rate (MT/s)	800	800	Same
Row address	A[12:0] (8K)	A[12:0] (8K)	Same
Column address	A[9:0] (1K)	A[9:0] (1K)	Same
Bank address	BA[1:0] (4)	BA[1:0] (4)	Same
CAS Latency	5	5	Same
tRCD & tRP (ns)	12.5	12.5	Same
Average Refresh Period	8192 cycles/64ms	8192 cycles/64ms	Same
I/O Capacitance	CIO: 2.5pf to 3.5pf	CIO: 2.5pf to 3.5pf	Same
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
I _{DD0} (mA)	90	65	Rev.C Better
I _{DD1} (mA)	100	75	Rev.C Better
I _{DD2P} (mA)	8	10	Rev.B Better
I _{DD2Q} (mA)	35	35	Same
I _{DD2N} (mA)	40	35	Rev.C Better
I _{DD3Pf} (mA)	30	25	Rev.C Better
I _{DD3Ps} (mA)	15	20	Rev.B Better
I _{DD3N} (mA)	60	45	Rev.C Better
I _{DD4R} (mA)	135	95	Rev.C Better
I _{DD4W} (mA)	135	100	Rev.C Better
I _{DD5} (mA)	90	100	Rev.B Better
I _{DD6} (mA)	6	10	Rev.B Better
I _{DD7} (mA)	180	170	Rev.C Better
Package 84b FBGA	8 x 12.5 x 1.2mm	8 x 12.5 x 1.2mm	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same