

AS4C128M16D2A-25BCN vs AS4C128M16D2-25BCN Comparison

Part Number & result Parameter	AS4C128M16D2A-25BCN	AS4C128M16D2-25BCN	Comparison Result
Product Description	DDR2 SDRAM, revA	DDR2 SDRAM, Rev0	Same
Technology node	38nm	63nm	Different
Capacity	2Gb (128M x 16)	2Gb (128M x 16)	Same
Memory Organization	16M, x16bits, x8 banks	16M, x16bits, x8 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 95°C)	Commercial (0°C to 95°C)	Same
Clock Frequency	400MHz	400MHz	Same
Data Rate (MT/s)	800	800	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 4.0pf	comparable
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
IDD Spec conditions	0C ≤ Tc ≤ 95C	0C ≤ Tc ≤ 95C	Same
I_{DD0} (mA)	130	120	Comparable
I_{DD1} (mA)	150	130	Rev.0 better
I_{DD2P} (mA)	16	15	Comparable
I_{DD2Q} (mA)	70	65	Comparable
I_{DD2N} (mA)	70	95	Rev.A better
I_{DD3Pf} (mA)	46	26	Rev.0 better
I_{DD3Ps} (mA)	32	16	Rev.0 better
I_{DD3N} (mA)	90	95	Rev.A better
I_{DD4R} (mA)	180	280	Rev.A better
I_{DD4W} (mA)	180	360	Rev.A better
I_{DD5} (mA)	290	230	Rev.0 better
I_{DD6} (mA)	12	6	Rev.0 better
I_{DD7} (mA)	330	300	Rev.0 better
Package 84b FBGA	8 x 12.5 x1.2mm Ball Array : 6.4 x 8.0 x 0.8mm	10.5 x 13.5 x1.2mm Ball Array : 6.4 x 8.0 x 0.8mm	Rev.A smaller
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same