

AS4C256M16D3B-12BCN vs AS4C256M16D3C-12BCN Comparison

(4Gb – 256M x 16, DDR3 rev.B vs rev.C Comparison)

Part Number & result Parameter	AS4C256M16D3B-12BCN	AS4C256M16D3C-12BCN	Comparison
Fab Process Technology	30nm	25nm	Different
Die Revision	Rev.B	Rev.C	Different
Density	4Gb (256M x 16)	4Gb (256M x 16)	Same
Memory Organization	32M words, x16bits, x8 banks	32M words, x16bits, x8 banks	Same
Operating Power Supply	VDD/VDDQ = 1.5V +/-0.075V	VDD/VDDQ = 1.5V +/-0.075V	Same
Operating Temperature	Commercial (0°C ≤ Tc ≤ 95°C)	Commercial (0°C ≤ Tc ≤ 95°C)	Same
Clock Frequency	800MHz	800MHz	Same
Data Rate (MT/s)	1600	1600	Same
Max. Frequency Available	800MHz	1066MHz	MPN -93BCN
CAS Latency	11	11	Same
tRCD & tRP (ns)	13.75	13.75	Same
Input Output Capacitance	2.3pf (Max)	2.3pf (Max)	Same
AC/DC Characteristics	Meet JEDEC	Meet JEDEC	Same
I_{DD0} (mA)	55	57	Comparable
I_{DD1} (mA)	75	81	Comparable
I_{DD2P0} (mA)	12	8	Comparable
I_{DD2P1} (mA)	18	14	Comparable
I_{DD2N} (mA)	25	24	Comparable
I_{DD2Q} (mA)	25	24	Comparable
I_{DD3P} (mA)	22	26	Comparable
I_{DD3N} (mA)	32	38	Comparable
I_{DD4R} (mA)	135	155	Comparable
I_{DD4W} (mA)	150	155	Comparable
I_{DD5B} (mA)	160	235	Rev.B better
I_{DD6} (mA)	12	12	Comparable
I_{DD6ET} (mA)	17	16	Comparable
I_{DD7} (mA)	195	190	Comparable
I_{DD8} (mA)	12	10	Comparable
96ball FBGA Package Dimensions	Package Dimensions: 9 x 13.5 x 1.2mm Ball Matrix: 6.4 x 12 x 0.8mm	Package Dimensions: 7.5x13.5x1.2mm Ball Matrix: 6.4 x 12 x 0.8mm	Rev.C smaller but Compatible
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same