

AS4C256M16D3LB-12BAN & AS4C256M16D3LC-12BAN Comparison

(4Gb – 256M x 16, DDR3L rev.B vs rev.C Comparison)

Part Number & result Parameter	AS4C256M16D3LB-12BAN	AS4C256M16D3LC-12BAN	Comparison Result
Fab Process Technology	30nm	25nm	Different
Capacity	4Gb (256M x 16)	4Gb (256M x 16)	Same
Memory Organization	32Mwords, x16bits, x8 banks	32Mwords, x16bits, x8 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 1.35V (1.283V to 1.45V)	V _{DD} & V _{DDQ} = 1.35V (1.283V to 1.45V)	Same
DDR3 Compatibility	Compatible to 1.5 ± 0.075V	Compatible to 1.5 ± 0.075V	Same
Operating Temperature	Automotive (-40°C to 105°C)	Automotive (-40°C to 105°C)	Same
Clock Frequency	800MHz	800MHz	Same
CAS Latency	11	11	Same
tRCD & tRP (ns)	13.75	13.75	Same
AC/DC Characteristics	Same	Same	Same
IDD Specification			
I_{DD0} (mA)	55	69	Comparable
I_{DD1} (mA)	75	98	Comparable
I_{DD2P0} (mA)	12	9.6	Comparable
I_{DD2P1} (mA)	18	17	Comparable
I_{DD2N} (mA)	25	29	Comparable
I_{DD2NT} (mA)	30	29	Comparable
I_{DD2Q} (mA)	25	29	Comparable
I_{DD3P} (mA)	22	32	Comparable
I_{DD3N} (mA)	32	46	Comparable
I_{DD4R} (mA)	135	186	Comparable
I_{DD4W} (mA)	150	186	Comparable
I_{DD5B} (mA)	160	282	Comparable
I_{DD6} (mA)	12	32	Comparable
I_{DD6ET} (mA)	17	16	Comparable
I_{DD7} (mA)	195	228	Comparable
I_{DD8} (mA)	12	12	Comparable
Package	96-ball FBGA package (9 x 13.5 x 1.1mm)	96-ball FBGA package (7.5 x 13.5 x 1.2mm)	Ball matrix dimension same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same
Reliability & QA	AEC-Q100 Qualified	AEC-Q100 Qualified	Same