

AS4C64M16D3LB-12BCN vs AS4C64M16D3LD-12BCN Comparison

Part Number & result Parameter	AS4C64M16D3LB-12BCN	AS4C64M16D3LD-12BCN	Comparison Result
Product Description	DDR3L SDRAM, Rev.B	DDR3L SDRAM, Rev.D	
Die Process Technology	38nm	25nm	Different
Capacity	1Gb (64M x 16)	1Gb (64M x 16)	Same
Memory Organization	8Mwords, x16bits, x8 banks	8Mwords, x16bits, x8 banks	Same
Operating Power Supply	$V_{DD} \& V_{DDQ} = 1.35V (1.283V \text{ to } 1.45V)$		Same
DDR3 Compatibility	Compatible to 1.5±0.075	Compatible to 1.5±0.075	Same
Operating Temperature	Commercial (0°C to 95°C)		Same
Clock Frequency	800MHz	800MHz	Same
Data Rate (MT/s)	1600	1600	Same
CAS Latency	11	11	Same
tRCD & tRP (ns)	13.75	13.75	Same
Average Refresh Period	7.8us at 0°C ≤ TC ≤ +85°C	7.8us at 0°C ≤ TC ≤ +85°C	Same
8192 cycles	3.9us at +85°C ≤ TC ≤ +95°C	3.9us at +85°C ≤ TC ≤ +95°C	
I/O Capacitance	2.2uF	2.3uF	Same
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
IDD Spec conditions	0C to 95C	0C to 95C	Same
I_{DD0} (mA)	56	52	Rev.D better
I_{DD1} (mA)	72	78	Rev.B better
I_{DD4R} (mA)	140	175	Rev.B better
I_{DD4W} (mA)	150	135	Rev.D better
I_{DD5B} (mA)	95	76	Rev.D better
I_{DD6} (mA)	15	15	Same
I_{DD7} (mA)	195	200	Rev.B better
Package 96b FBGA	(9mm x 13mm x 1.2mm) Ball Array (mm): 12x 6.4 x 0.8	(7.5mm x 13mm x 1.0mm) Ball Array (mm): 12x 6.4 x 0.8	Rev.D smaller
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same