

AS4C256M8D3LB-12BCN vs MT41K256M8DA-125:K Comparison

Part Number & result Parameter	AS4C256M8D3LB-12BCN	MT41K256M8DA-125:K	Comparison Result
Product Description	DDR3L SDRAM	DDR3L SDRAM	Same
Capacity	2Gb (256M x 8)	2Gb (256M x 8)	Same
Memory Organization	32Mwords, x8bits, x8 banks	32Mwords, x8bits, 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±0.075	Compatible to 1.5±0.075	Same
Operating Temperature	Commercial (0°C to 95°C)	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	8192 cycles/64ms upto 85C	8192 cycles/64ms upto 85C	Same
I/O Capacitance	Comparable		Same
Pin to Pin Compatible	Pin to Pin Compatible		Same
AC/DC Characteristics	Same	Same	Meet JEDEC
IDD Specification			
IDD Spec conditions	-40C to 95C	0C to 85C	Different
I_{DD0} (mA)	62	39	Comparable
I_{DD1} (mA)	75	52	Comparable
I_{DD2P0} (mA)	12	12	Comparable
I_{DD2P1} (mA)	12	14	Comparable
I_{DD2N} (mA)	43	31	Comparable
I_{DD2Q} (mA)	42	20	Comparable
I_{DD3P} (mA)	14	21	Comparable
I_{DD3N} (mA)	48	32	Comparable
I_{DD4R} (mA)	121	94	Comparable
I_{DD4W} (mA)	129	97	Comparable
I_{DD5B} (mA)	222	180	Comparable
I_{DD6} (mA)	15	12	Comparable
I_{DD6ET} (mA)	19	15	Comparable
I_{DD7} (mA)	211	156	Comparable
I_{DD8} (mA)	12	14	Comparable
Package	78-ball FBGA package (8mm x 10.5mm x 1.2mm)	78-ball FBGA package (8mm x 10.5mm x 1.2mm)	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same