

AS4C256M8D3LC-12BAN vs MT41K256M8DA-125AIT:K Comparison

Part Number & result Parameter	AS4C256M8D3LC-12BAN	MT41K256M8DA-125AIT: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	Automotive (-40°C to 105°C)	Automotive Ind (-40°C to 95°C)	Different
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	64ms (≤85C), 32ms (≤95C)	64ms (≤85C), 32ms (≤95C)	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 105C	-40C to 85C	Different
I_{DD0} (mA)	84	39	Comparable
I_{DD1} (mA)	96	52	Comparable
I_{DD2P0} (mA)	18	12	Comparable
I_{DD2P1} (mA)	27	14	Comparable
I_{DD2N} (mA)	42	31	Comparable
I_{DD2Q} (mA)	42	20	Comparable
I_{DD3P} (mA)	42	21	Comparable
I_{DD3N} (mA)	66	32	Comparable
I_{DD4R} (mA)	186	94	Comparable
I_{DD4W} (mA)	192	97	Comparable
I_{DD5B} (mA)	174	180	Comparable
I_{DD6} (mA)	40	12	Comparable
I_{DD6ET} (mA)	19	15	Comparable
I_{DD7} (mA)	288	156	Comparable
I_{DD8} (mA)	17	14	Comparable
Package 78b FBGA	(7.5mm x 10.5mm x 1.2mm) Ball Array (9.6 x 6.4 x 0.8mm)	(8mm x 10.5mm x 1.2mm) Ball Array (9.6 x 6.4 x 0.8mm)	Comparable
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same