

AS4C256M16D3LC-12BIN vs MT41K256M16HA-125ITE Comparison

Part Number & result Parameter	AS4C256M16D3LC-12BIN	MT41K256M16HA-125 ITE	Comparison Result
Product Description	DDR3L SDRAM	DDR3L SDRAM	Same
Capacity	4Gb (256M x 16)	4Gb (256M x 16)	Same
Memory Organization	32Meg, x16bits, x8 banks	32Meg, 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±0.075	Compatible to 1.5±0.075	Same
Operating Temperature	Industrial (-40°C to 95°C)	Industrial (-40°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	-40C to 95C	
I_{DD0} (mA)	57	66	Alliance better
I_{DD1} (mA)	81	87	Alliance better
I_{DD2P0} (mA)	8	18	Alliance better
I_{DD2P1} (mA)	14	37	Alliance better
I_{DD2N} (mA)	24	32	Alliance better
I_{DD2Q} (mA)	24	32	Alliance better
I_{DD3P} (mA)	26	38	Alliance better
I_{DD3N} (mA)	38	47	Alliance better
I_{DD4R} (mA)	155	235	Alliance better
I_{DD4W} (mA)	155	171	Alliance better
I_{DD5B} (mA)	235	235	Same
I_{DD6} (mA)	12	20	Alliance better
I_{DD6ET} (mA)	16	25	Alliance better
I_{DD7} (mA)	190	243	Alliance better
I_{DD8} (mA)	10	20	Alliance better
Package 96b FBGA	(7.5mm x 13mm x 1.2mm) Ball Array (mm): 12x 6.4 x 0.8	(9mm x 14mm x 1.2mm) BallArray (mm): 12x 6.4 x 0.8	Comparable
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same