

MT41K64M16TW-107J vs AS4C64M16D3LD-10BCN Comparison

Part Number & result Parameter	MT41K64M16TW-107J	AS4C64M16D3LD-10BCN	Comparison Result
Product Description	DDR3L SDRAM	DDR3L SDRAM	
Die Process Technology	25nm	25nm	Same
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 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	933MHz	933MHz	Same
Data Rate (MT/s)	1866	1866	Same
CAS Latency	13	13	Same
tRCD & tRP (ns)	13.91	13.91	Same
Average Refresh Period 8192 cycles	7.8us at 0°C ≤ TC ≤ +85°C 3.9us at +85°C ≤ TC ≤ +95°C	7.8us at 0°C ≤ TC ≤ +85°C 3.9us at +85°C ≤ TC ≤ +95°C	Same
I/O Capacitance	2.1pF	2.1pF	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)	46	54	Micron better
I_{DD1} (mA)	63	80	Micron better
I_{DD4R} (mA)	135	195	Micron better
I_{DD4W} (mA)	149	150	Comparable
I_{DD5B} (mA)	165	78	Alliance better
I_{DD6} (mA)	12	15	Comparable
I_{DD7} (mA)	219	220	Comparable
Package 96b FBGA	(8mm x 14mm x 1.1mm) 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	Ballmatrix dimension same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same