



12815 NE 124th St STE#D, Kirkland, WA-98034

AS4C128M16D3C-93BCN vs MT41J128M16HA-15E:D Comparison

Part Number & result Parameter	AS4C128M16D3C-93BCN	MT41J128M16HA-15E:D	Comparison Result
Product Description	DDR3 SDRAM	DDR3 SDRAM	Same
Capacity	2Gb (128M x 16)	2Gb (128M x 16)	Same
Memory Organization	16Mwords, x16bits, x8 banks	16Mwords, x16bits, x8 banks	Same
Operating Power Supply	V _{DD} & V _{DDQ} = 1.5V (+/-0.075V)	V _{DD} & V _{DDQ} = 1.5V (+/-0.075V)	Same
Operating Temperature	Commercial (0°C ≤ T _c ≤ 95°C)	Commercial (0°C ≤ T _c ≤ 95°C)	Same
Clock Frequency (Max)	1066MHz	667MHz	Alliance better
Data Rate (Max)	2133MT/s	1333MT/s	Alliance better
CAS Latency	14 (2133Mhz), 11 (667Mhz)	11	Same
tRCD & tRP (ns)	13.09 (2133Mhz), 13.75 (667Mhz)	13.75	Same
Average Refresh Period	8192 cycles/64ms upto 85C	8192 cycles/64ms upto 85C	Same
I/O Capacitance	2.1pf	2.5pf	Comparable
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	
I_{DD0} (mA)	85	120	Alliance better
I_{DD1} (mA)	95	150	Alliance better
I_{DD2P0} (mA)	21	12	Comparable
I_{DD2P1} (mA)	33	35	Alliance better
I_{DD2N} (mA)	50	65	Alliance better
I_{DD2Q} (mA)	50	65	Alliance better
I_{DD3P} (mA)	50	45	Alliance better
I_{DD3N} (mA)	64	75	Alliance better
I_{DD4R} (mA)	185	290	Alliance better
I_{DD4W} (mA)	190	335	Alliance better
I_{DD5B} (mA)	165	255	Alliance better
I_{DD6} (mA)	20	9	Micron Better
I_{DD6ET} (mA)	25	12	Micron Better
I_{DD7} (mA)	280	445	Alliance better
I_{DD8} (mA)	19	14	Micron Better
Package 96b FBGA	(7.5mm x 13mm x 1.0mm) Ball Array (mm): 12x 6.4 x 0.8	(9mm x 14mm x 1.2mm) Ball Array (mm): 12x 6.4 x 0.8	Alliance Better Ball Matrix Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same