ALLIANCE MEMORY

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

AS4C256M16D3C-12BIN vs EM6GE16EWAKG-12BH Comparison

Part Number & result Parameter	AS4C256M16D3C-12BIN	EM6GE16EWAKG-12BH	Comparison Result
Product Description	DDR3 SDRAM	DDR3 SDRAM	Same
Capacity	4Gb (256M x 16)	4Gb (256M x 16)	Same
Memory Organization	32Mwords, x16bits, x8 banks	32Mwords, 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	Industrial ($-40°C \leq Tc \leq 95°C$)	Automotive ($-40°C \leq Tc \leq 105°C$)	Different
Clock Frequency (Max)	800MHz	800MHz	Same
Data Rate (Max)	1600MT/s	1600MT/s	Same
CAS Latency	11	11	Same
tRCD & tRP (ns)	13.75	13.75	Same
Average Refresh Period	7.8us (<85C), 3.9us at 85C~95C	7.8us (<85C), 3.9us at 85C~95C	Same
I/O Capacitance	2.3pf	2.3pf	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 105C	Different
I_{DD0} (mA)	57	75	Alliance better
I_{DD1} (mA)	81	106	Alliance better
I_{DD2P0} (mA)	8	11	Alliance better
I_{DD2P1} (mA)	14	19	Alliance better
I_{DD2N} (mA)	24	32	Alliance better
I_{DD2Q} (mA)	24	32	Alliance better
I_{DD3P} (mA)	26	34	Alliance better
I_{DD3N} (mA)	38	50	Alliance better
I_{DD4R} (mA)	155	202	Alliance better
I_{DD4W} (mA)	155	202	Alliance better
I_{DD5B} (mA)	235	306	Alliance better
I_{DD6} (mA)	12	32	Alliance better
I_{DD7} (mA)	190	247	Alliance better
I_{DD8} (mA)	10	15	Alliance better
Package 96b FBGA	(7.5mm x 13.5mm x 1.2mm) Ball Array (mm): 12x 6.4 x 0.8	(7.5mm x 13.5mm x 1.2mm) Ball Array (mm): 12x 6.4 x 0.8	Same
Package Material	Pb and Halogen Free	Pb and Halogen Free	Same